Currency Swap of Central Bank: Influence on International Currency System

Content

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I. Question introduction and research purpose

In October 2013, central banks in six western countries headed by Federal Reserve lengthened their original swap arrangement with no quota, which had generated an enormous response on the international society. What was related to this was in December 2008, a domestic currency swap agreement between China and Korean is signed with value reached 180 billion RMB/ KRW 38 trillion, which for the first time started RMB as a precedent equivalent currency for currency swap. Before this, based on 10+3, China had joined the bilateral swap between USD and domestic currency extended by Chiang Mai Initiative. What is the meaning of currency swap of central bank to international currency system, especially for currency swap between six western countries and RMB? Does it mean that dominant status of western currency, especially USD, in the world is being frozen in international currency system? What kind of influence shall RMB currency swap generate on RMB internationalization and international currency system? All these matters have widely attracted scholars home and abroad to concern and think.

Pace of the reform of international currency system is slow. Especially for the reform of IMF itself, after crisis in 2008, it once made some progress, thus it excited higher expectation from emerging market economics. However the following reform was nearly bogged down. In contrast, currency swap between Federal Reserve and main western countries increase constantly. Does the currency swap in central bank be the tendency in future reform of international currency system? All of these are deserved our further observation and study, and make scientific analysis from the view of theory and policy.

The purpose of this research is to discuss the nature of currency swap in central bank, relationship between currency swap and the reform of international currency system based on reorganization of development history of currency swap in central bank. It also takes the relationship of RMB currency swap signed between People's Bank of China and other central banks on the background of international currency system reform into consideration. From the view of promoting international currency system reform, the final purpose of this paper is to put forward strategic thinking for currency swap in western central bank, promote RMB internationalization and provide policy selection for currency swap on the basis of RMB.

II.Currency swap: Brief historical review

1. Basic concept of central bank currency swap

The original conception of swap means exchange, and traditional swap refers to foreign exchange swap and currency swap which are a kind of foreign exchange transaction. Foreign exchange swap refers to transaction parties perform some foreign exchange term swap through contract, while currency swap is currency type swap of foreign exchange, or performs term swap as currency type swap performed. Despite foreign exchange swap or currency swap, the main purpose is to avoid risk of foreign exchange rate and currency type. These transactions are provided commercial bank, while clients object of foreign exchange swap transaction and currency swap transaction mainly are importer and exporter and other bodies of multinational manager. Certainly, currency swap transaction is used for other purposes later. The most famous example is before 2008, Papandreou's government in Greece performed currency swap with Goldman Sachs for purpose of covering liability scale of government. The method is that Goldman Sachs provided USD spot exchange for Greece government (its nature is loan but cannot be calculated into loan), therefore Greece government exchanges with USD spot exchange provided by Goldman Sachs by using future government highway fee income (euro income for a long term). Thus, the nature of Greece government loaning from Goldman Sachs was covered in the name of swap. Since from its form, it can be said that Goldman Sachs changed USD spot exchange into euro forward exchange, while Greece government changed long term euro into spot USD which can be used for current. In the financial statement of Greece government, this kind of debt turned into derivatives transaction of foreign exchange which premised of extra forward discount (in fact, it is interest) of euro paying to Goldman Sachs.

Central bank currency swap agreement we discussed now is another agreement different nature whose essence is that both parties to provide standby credit for the other party. It is an agreement that stipulated party uses domestic currency to exchange the other party currency or other currencies in a certain condition. Currency swap agreement may be bilateral, and may be multi-lateral. Generally, if some condition and term are regulated, when Party A needs Party B to provide currency, Party B should provide capital for Party A under the bidding conditions. While Party A uses domestic currency to exchange foreign currency provided by Party A or currency of Party B. this kind of currency swap agreement usually is signed by a country central bank with another country central bank.

2. Tracing back to the historical of currency swap in central bank

Originate of central bank currency swap can be traced back to Bretton Woods system under which currency swap agreement signed by Federal Reserve and Central Bank of France was announced in February 28,1962 and was effected in March1 In that time, Federal Reserve needed European countries to intervene in market for maintaining stability of USD exchange rate. Therefore, Central Bank of France credited 5 billion franc to Federal Reserve through swap agreement, while Federal Reserve credited USD 50 million for Central Bank of France account. This swap was original a short term swap with expiration of 3 months. However, with the deepen of USD crisis, Federal Reserve continually signed swap agreement with Austria, Belgium, Britain, Germany, Italy, Holland, Switzerland, Canada and other countries and credit limit of swap was up to USD 0.9 billion in 1963. In August 1971, USA government announced to cease USD exchange gold, then USD exchange rate suffered a disastrous decline, but bilateral currency swap of USA and European countries did not cease but continually increase. In the middle of the1970s, limits were increased to USD 20 billion. Currency swap of this period had obvious feature of other countries helping USA to deal with USD crisis and was a cooperative mean taken by Bretton Woods system to suppress trend of market underselling USD and panic buying other currencies. Since Bretton Woods system regulated those currencies of all member countries and USD implemented exchange rate system and fluctuation of market exchange rate level could not exceed 1% of official exchange rate. If exceeded, each country was obliged to intervene in market to maintain exchange rate stable.

In a parallel, under the leading of IMF, loan general arrangement was signed in 1962. IMF signed an agreement of ten countries of USA, Britain, Germany, France, Japan, Belgium, Holland, Canada and Sweden to collect enough capital to help alleviate USD crisis. When IMF needed, it could loan money from those countries with quota USD 6 billion in initial stage, but later the quota continually increased until 1983 was up to USD 17 billion of special drawing right. Due to it was standby credit agreement, it also wan called "General agreement of loan". Certainly, it was distinct with currency swap agreement of members central banks in form, but IMF needed to use other currencies to swap currency from borrowed countries. However, its essence was standby credit which used to intervene in market or cope with crisis for provision of credit arrangement.

After Bretton Woods system broken, it was a common phenomenon for turmoil of international financial market and financial crisis was frequently broken. After financial crisis broken, the most need for currency authority of a country is foreign exchange capital, since market was stable, currency authority needed to use lots of foreign exchange reserve capital to intervene in to fight against speculators in market speculation and manipulation. When reserve capital was inadequate, outward capital was needed for help. Although it was difficult for IMF to provide capital in time, it needed very complex negotiation and internal audit procedure. Therefore, apart from assisted capital provided by IMF, currency swap agreement among central banks were regarded as a main mean to deal with market impact and capital of currency swap of central bank became standby foreign exchange reserve position (Obstfeld et al, 2009). And currency swap of central bank was considered as a useful helper for some countries to cope with impact of sudden market impact events. For example, For example， after ouTburst of "9 ·11" terrorist attacks in 2001,federal reserve signed the temporary currency swap agreement with European central bank, bank of England, and bank of Canada in order to prevent the turmoil of financial markets and the term is 30 days. But currency swap as the measure to intervene in markets and deal with the paroxysmal shocks for western central banks, the scale of currency swap and the surviving time of currency swap is usually short.

3. Development of Federal Reserve currency swap after subprime mortgage crisis

New round massive currency swap of central bank was started after global financial crisis triggered by subprime mortgage crisis of USA and its massive and term exceed the history of currency swap. In December 2007, at initial stage of breaking of subprime mortgage crisis of USA, Federal Reserve signed currency swap agreement of USD 20 billion and USD 4 billion separately with European Central Bank and Switzerland National Bank. In that time, the main goal is to help them have sufficient USD to intervene in in market. Later, with financial crisis deepened, by September 24, 2008, Federal Reserve resigned agreement with European Central Bank and Switzerland National Bank for 7 times, and credits separately extend to USD 240 billion and USD 60 billion. In the process, other Western countries central banks signed bilateral swap agreement with Federal Reserve one after another, and by September 24, 2008, Federal Reserve signed currency swap agreement with nine

Western central bank. The amount of money of swap agreement was up to USD 620 billion. New added Western central banks are: Bank of Canada (USD 30 billion), Bank of Japan (USD 120 billion), Bank of England (USD 80 billion), National Bank of Denmark (USD 150 billion), Norges Central Bank (USD 15 billion), Reserve Bank of Australia (USD 30 billion) and Sveriges Riksbank (USD 10 billion). In October 29, 2008, central banks signed currency swap agreement with Federal Reserve were around 14 countries and gross was up to USD 850 billion which was the four times [①]of IMF gross asset.

The agreement was expired in February, 2010 when international financial market was relatively stable, thus it did not be extended when it was expired. But after a while, European debt crisis broke again and worse and worse. International financial market had to stabilize the market by providing liquidity to European countries which became the unavoidable problem to Western central banks. Therefore, in May, 2010, Federal Reserve signed new currency swap agreement which the expiration was 3 years with Bank of Canada, Bank of England, European Central Bank, Bank of Japan and Switzerland National Bank. New currency swap agreement did not set specific amount and only when needed. In October 31, 2013, when this agreement expired, it was declared to extend for a long term and continued to set no limit amount. Hence, nature of temporary liquidity provided by currency swap of central bank had radical change which was regarded as prototype of new international currency system by some people (Liyang, 2013). (After subprime mortgage crisis broken in USA, USD currency swap of Federal Reserve and other countries central banks shows in the following table1)

Table1.Currency swap agreement signed by Federal Reserve after financial crisis in USA

Announced time	Central banks of participating state	Scale	Term
December 12, 2007	European Central Bank ECB Switzerland National Bank SNB	USD 20 billion USD 4 billion	tender period is 28 day and term of agreement is 6 months

[①] These 14 central banks are Reserve Bank of Australia, Central Bank of Brazil, Bank of Canada, Dammars National bank, Bank of England, European Central Bank, Bank of Japan, Bank of Korea, BANCO DE MEXICO, New Zealand Reserve Bank, Norwegian Central Bank, Monetary Authority of Singapore, Sveriges Riksbank and Switzerland National Bank.

March 11, 2008	European Central Bank ECB Switzerland National Bank SNB	Expansion to USD 30 billion Expansion to USD 6 billion	
May 2, 2008	European Central Bank ECB Switzerland National Bank SNB	Expansion to USD 50 billion Expansion to USD 12 billion	Term of agreement extended to January 30, 2009
July 30, 2008	European Central Bank ECB	Expansion to USD 55 billion	With ECB and SNB all added 84 days tender period
September 18, 2008	European Central Bank ECB Switzerland National Bank SNB Bank of Japan BOJ Bank of England BOE Bank of Canada BOC	Expansion to USD 110 billion Expansion to USD 27 billion New sign USD 60 billion New sign USD 40 billion New sign USD 10 billion	Tender period of one month and three months
September 24, 2008	Reserve Bank of Australia RBA Dammars National bank Sveriges Riksbank Norges Central Bank	New sign USD 10 billion New sign USD 5 billion New sign USD 10 billion New sign USD 5 billion	Tender period of one month and three months
September 26, 2008	European Central Bank ECB Switzerland National Bank SNB	Expansion to USD 120 billion Expansion to USD 30 billion	
September 28, 2008	European Central Bank ECB Switzerland National Bank SNB Bank of Canada BOC Bank of England BOE Bank of Japan BOJ Dammars National bank Norges Central Bank Reserve Bank of Australia Sveriges Riksbank	Expansion to USD 240 billion Expansion to USD 60 billion Expansion to USD 30 billion Expansion to USD 80 billion Expansion to USD 120 billion Expansion to USD 15 billion Expansion to USD 15 billion Expansion to USD 30 billion Expansion to USD 30 billion	
October 13 , 2008	European Central Bank ECB Switzerland National Bank SNB Bank of England BOE Bank of Japan BOJ	scale-up as required scale-up as required scale-up as required compared the same to scale-up as required	Term extended to April 30, 2009
October 14, 2008	Bank of Japan	scale-up as required	
October 28, 2008	New Zealand Reserve Bank NZRB	New sign USD 15 billion	
October 29, 2008	Central Bank of Brazil Central Bank of Mexico Bank of Korea Monetary Authority of Singapore	New sign USD 30 billion New sign USD 30 billion New sign USD 30 billion New sign USD 30 billion	Term extended to April 30, 2009
February 3, 2009 and June 25, 2009	Above-mentioned 14 countries central bank	Account up to USD 640 billion	Swap terms separately extended to October 30, 2009 and January 31, 2010

May 9, 2010	European Central Bank ECB Switzerland National Bank SNB Bank of England BOE Bank of Japan BOJ Bank of Canada BOC	No definite provision limit, swap as required	set term of three years
October 31, 2013	As above	No definite provision limit, swap as required	permanent

Data sources: 1. Federal Reserve: Central Bank Liquidity Swaps.

http://www.federalreserve.gov/monetworkarypolicy/bst_liquidityswaps.htm

2. Goldberg, Linda S., Craig Kennedy and Jason Miu. 2011 “Central Bank USD Swap Lines and Overseas USD Funding Cost”, *FRBNY Ploicy Review*, May 2011.

Currency swap of Federal Reserve was enacted by empowering of Clause 14 of *Federal Reserve Act*, empowered and audited by Open Market Committee of Federal Reserve and managed by Federal Reserve Bank of New York. During financial crisis, Federal Reserve is the main supporter of USD liquidity to other countries. Currency swap of Federal Reserve and Western central bank, as a kind of standby credit, is not freely provided. Basing on agreement, if one part extracts money from the other part, then the other part needs to pay interest. Generally, interest rate which is based on USD OIS interest rate (which refers to overnight interest swap of USD) [②] adds 50-100 basis points, or basing on USD LIBOR interest rate adds 50-100 basis points to collect.

There are few cases about direct swapping of USD OIS or LIBOR calculation without point, for example, September 29, 2008 Federal Reserve and Reserve Bank of Australia employed the method of USD LIBOR interest calculation to sign currency swap, but later method of USD OIS interest calculation with addition of certain basic point takes main place. From the method of interest calculation, usage cost of this capital which was equal to short term credit interest rate provided by central bank to domestic best reputation commercial bank lowered than capital cost in currency market, but it was not the lowest. According to evaluation of Papadia, was former official of European Central Bank, all currency swap interest rate level performed by Federal Reserve and other countries central bank was around 1%~1.75% (Papadia,

[②] In fact, OIS（Overnight Interest Swap）is the average value of USD overnight interest swap fluctuation interest rate in a certain term. In 2009, Federal Reserve decreased 50 basic point on the basis of currency swap interest rate in OIS+100 basic point of other countries central banks to decrease cost of USD capital. Since then, currency swap interest rate of Federal Reserve and other central banks basically kept around OIS+50 bps, which were regarded as efforts of Federal Reserve to decrease capital cost.

2013). Therefore, from interest charging, when central bank currency swap was performed, it is like Federal Reserve provided liquidity to other countries central banks which was regarded as domestic commercial banks. But the provided liquidity was based on the currency consideration of other country, not basing on bond of American government or other bills nor pure credits. American accepted currency of other central banks without paying interest and swap currency usually stored in domestic bank account. After expiration, other countries central banks should return USD and interests to Federal Reserve. If exchange rate was changed, Federal Reserve did not afford any risk of exchange rate. Theoretically, if other countries central banks provided domestic currency swap to Federal Reserve, it also should collect the same level interest whose nature can be regarded as short term credit provided by Federal Reserve.

4. Development of other central banks currency swap

Another case of central bank currency swap is currency swap of ASEAN. Five members of ASEAN countries[③] had signed currency swap agreement in 1977, and its main propose was to guard against market turbulence by adding region currency swap to intervene sources of foreign exchange reserves in market. The agreement was once a short term agreement but every year is would be extended. After broken of Southeast Asian Financial Crisis, since the capital scale of former swap agreement was little, it was extended to 10+3 “Chiang Mai Initiative” after participation of China, Japan and Korean. Under “Chiang Mai Initiative”, a series of bilateral currency swap sub-agreements were signed and swap limits were extremely increased. At present, the bilateral agreement is developed to a multi-lateral agreement, and then developed into common reservoir. Capital scale has decided to extend from USD 120 billion to USD 240 billion. Most currency swaps are swaps between domestic currency and USD, since USD are main international reserve currency and also are main currency used by countries currency authorities to intervene market. However, after broken of financial crisis of USA, USD’s value showed volatility which brought heavy stress to values maintenance and appreciation of foreign exchange reserve in many countries and held USD cost was continually arising. In order to scatter the risk of currency concentration, the trend of reserve currency diversification appeared new drive. But euro was in the background of European sovereign debt crisis, it became an unstable

[③] These 5 ASEAN members are Indonesia, Malaysia, Philippines, Singapore and Thai.

currency, which gave an attack to those who expected euro would afford the unstable risk of USD value. Hence, some non-mainstream currencies also became the main role of currency swap, especially currency of big country of developing also became the willingly asset held by countries central banks. In such background, some countries began to sign swap currency agreement which domestic currency would direct be regarded as exchange objects. For example, in June 25, 2012, Switzerland and Poland central bank signed domestic swap agreement of Swiss franc and PLN; in December 4, 2012, India and Japan signed domestic swap agreement of USD 15 billion lasting for three years. In background of RMB internationalization, RMB attended in bilateral currency swap. This was an inevitable result that international reserve system which took USD as a core changed to multi-lateral international reserve currency system. And it had an important meaning in future international currency system revolution.

III. Frequently financial crisis break and Western USD currency swap protracted

1. Analysis of view of Federal Reserve and Western Central Banks swap protracted

Before, only short term method of central bank currency swap against crisis, under financial crisis frequently broken and constant turmoil of market, it changed into permanent system, but without limits, specific limitations and rules. Market and academia both aroused wide concern. But whether it can suggest that financial turmoil and crisis already became normal? Or issuer of credit currency-central bank which faced economic globalization needed cross border currency issue cooperated system to fit with? Or it tried to establish an international currency credit control system?

Federal Reserve is the positive pioneer and propellant of currency swap. It is no doubt that they found persuasive evidence by theirs action. Scholar (Fleming and Klagge, 2010) of Federal Reserve though that after global financial crisis intrigued by financial crisis of USA, USD capital shrinks suddenly occurred in global financial market. Federal Reserve, through exchange channel, provided timely USD liquidity to countries which signed currency swap agreement with USA, thus financial shrink and attack of these countries were alleviated. According to the research of Federal Reserve scholar, when market was in shrinkage, USD capital provided by currency swap channel should low cost of raised USD in market, in which currency swap channel was provided by Federal Reserve. Therefore they thought that Western central bank swap which took Federal Reserve as a center provided extra liquidity for out foreign reserve liquidity. And it contributed to these countries to cope with financial crisis impact and to alleviate crisis (Goldberg et al., 2011). Of course, why financial crisis of USA would lead liquidity shrinkage of other countries financial market; why it was impacted by crisis but needed USD to intervene market; they would not talk about these. They implicitly thought this is a natural and immutable condition.

Mainstream economists and scholars of USA have a popular and positive encouraged attitude toward central bank currency swap. Senior research fellow of Peterson Institute for International Economics, Truman (Truman, 2013) points out that if crisis frequently broken and cannot be avoided in future, global central bank currency swap network should be established and plays the final lender role as required. He also suggests this network can be divided into three levels and according to different levels to start currency swap as required. The first level is started by IMF and based on its standard and judgment, when it is needed, central banks of members are suggested to use swap channel to provide liquidity for other commercial banks of other countries. The second level is present central bank group (as six countries central banks) which based on their own standard and judgment to start swap to provide liquidity for market. The third level is based on bilateral requirement of each central bank to start currency swap. Although he does not discuss how the global currency swap system is established in detail, what is the essential distinction among the swap start of the three levels and how to avoid ethical risk; international financial academia gives concentrated attention to his idea.

Destais of French Centre D'Etudes Prospectives et D'Informations Internationales (CEPII) thinks that though central currency swap network may not the best, compared with the last mender with international system, for example, compared with IMF, it remained a sub-optimal choice which can provide required liquidity (Destais, 2014a) for market when market suffers bad crisis. He also thinks that if participating swap central bank insists on transparency, positive function of global currency swap network is far more than its negative function. Therefore, he suggests G20 to regulate some specifications for central bank currency swap to ensure transparency and to avoid ethical risk (Destais 2014b). Of course, he does not explain why IMF is the best option to final lender but cannot realize.

Singapore scholar Rana（2012） points out that the reason why currency swap of

Western central bank can become liquidity supply system out of preserved multi-lateral system is that these countries can get needed liquidity as required in preserved multi-lateral, whether the requirement of getting liquidity is legal ,and the main participator still is issuer of international currency. Therefore, out of operated varied systems, like IMF, they need a supply channel to get liquidity, and it is necessary for central bank to do currency swap.

From the point of stabilizing international financial market, Michael Obsfeld et al thinks that when sequence and capital concentration flight are showed up in a country, reserve level of a country is an important indicator to predicate how much the domestic currency exchange rate will depreciated, and it is far enough to only base on adverse balance scale of balance of payments account. Therefore, they also think that currency swap limits provided by Federal Reserve is a reserve line of a country which has the same function of stabilizing interest rate as foreign exchange reserve (Obstfeld et al, 2009).

For the function of Western central bank currency swap focused on Federal Reserve, Western scholars have different opinions. Some scholars think real meaning of this currency swag is nothing, since when a country foreign exchange reserve accesses to endless, function of maintaining domestic currency exchange rate is limited to employ currency swap (Hooyaman, 1994).

Other scholars think that when it is involved in huge crisis, central currency swap has positive function, but if it is lengthened and in institutionalization, there will be some problems. Firstly, in some sense central bank participated the swap will lose independence of currency policy. Since currency policy will adjust with domestic situation, but if swap adds domestic currency issue with outward need, central bank will lose independence of currency policy. Secondly, central bank itself exist ethical risk problem in helping domestic financial institutes, but now ethical risk is difficult to control with the addition of international factors. In domestic, help of central bank is based on basic bankruptcy proceedings. International final lender mechanism is established through central bank currency swap, however in international, it is unable to establish international bankruptcy system. Fourth, international final lender mechanism should not be controlled by several central banks, and usually it is controlled by IMF. If central bank swap turns into permanent mechanism, the function of IMF will be broken (Papadia, 2013; Destais，2014b) . Some scholars worry about political judgment of currency swap object chosen by USA, since Peru, Turkey, Indonesia and India wanted to sign currency swap with USA but were refused. Currency swap cannot face to all members of IMF, so when the function of IMF to provide liquidity for all members cannot be ignored as currency swap needed (Talley, 2014). Shen Liantao also thinks that currency swaps of western central banks arrange with limitations which exclude emerging market countries and force them to seek their own liquidity supply channel. It is an inevitable choice for emerging market countries to establish their own currency swap and financial institutes with multi-lateral development (Shen, 2014).

2. The basic judgments on the nature of Federal Reserve Currency Swap and its existing problems

Through the analysis about the establishment and lengthening of the dollar swap mechanism with the core of Federal Reserve by western scholars, I can get several clear judgments.

Firstly, the western mainstream opinions provide theory and public opinion support for the lengthening of Federal Reserve and currency swaps of six western central banks. Most of the scholars emphasize that currency swaps of central banks can be the indispensable added liquidity for emergencies and that the arrangement of the mechanism can provide the additional stability guarantee for the existing international currency system. It is considered as the basis of building the global financial safety nets by some scholars and it has a positive significance for the international financial system.

Secondly, the currency swaps of western central banks are not the substitution for IMF. The main Western international countries of currency issue have other fund demands that they cannot seek the fund to IMF. So they need to build the channel of obtaining the liquidity out of the IMF. Before the Bretton Woods System collapsed, IMF provided the short-term fund relief for the developed countries and also provided the loan for USA in order to save the dollar crisis. But after the Bretton Woods System collapsed, IMF rarely provided the fund aid for the developed countries, because they can be able to solve the problems of the liquidity by themselves. The global financial crisis in 2008-2009 has already proved that the developed countries cannot care only for themselves and that the help network becomes more and more important to them.

Thirdly, the lengthening and immobilization of swap mechanism of the western central banks have some shortcomings and its transparency and the principle and conditions of swaps to start may trigger the moral hazard. Some scholars think that they should formulate the corresponding rules based on G20 and implement supervision.

Fourthly, currency swaps of central banks with the core of the Federal Reserve have the problems of inclusion and selecting the objects. Emerging market countries cannot participate in and may trigger new problems. It should build a wider range of currency swap network of central banks on the extensive base and need to reinforce the leading role of IMF on help network further.

Fifthly, most of the points of view do not think that the currency swaps is the way to reform the existing international currency system. And there are not clear views that it can build the new international currency system through the currency swap of central banks.

IV. The currency swap in western central bank and the reform of international currency system

1. The relationship between currency swap in western central bank and the international currency system

The currency swaps of central banks of six western countries that do not have any term and quota serve for maintaining the existing international currency system with the core of USD. As the economic strength and financial strength of USA relatively declines, only depending on USA cannot maintain the stabilization of the existing system. At the same time, in diversified international currency system, the currency issue from another five central banks, including Euro, Pound, Yen, Canadian dollar and Swiss Franc cannot replace the USD to be the stabilizator of the market, but it becomes the shifting object of the crisis cost and suffers from the passive impact, when the USD fluctuates greatly and the international financial market is unsteady. When the market is unsteady, the main currency of other countries intervening markets is still dollar, other than USA. So they have the impetus as USA to maintain the stability of the international currency system with the core of USD. The international currency system, where the dollar hegemony is as the core position, has dual characters. One is that it can guarantee that the international economical transaction can carry through under the stable monetary and financial environment and the current international economic order can be maintained. Another result is that USA can continue to benefit in this system, including grabbing seigniorage and shifting outside the cost that USA adjusts its own economy, and other countries undertake the corresponding cost to maintain stability in this system. As European counties, Japan and Canada are allies and friends of USA, no party have the strength and will to challenge the international currency hegemony of USA. So this swap becomes their passive choice. Shen Liantao thinks that the currency swap between Federal Reserve and other five central banks is to maintain its own benefit and market stability, but the behaviors only caring about themselves can make the international currency system more turbulent (Shen, 2014). Rhee and other people think that regional currency cooperation and currency swap of the central banks cannot replace the broader international cooperation, and there may not be consistency between the different benefit orientation and operation mechanism of the participants of mechanism and different transparency and the stability of global financial system. So it needs the global level to cooperate in the macro-economic policy, market supervision and relief condition (Rhee et al, 2013). Destais also thinks that currency swap of western central banks needs to formulate the related transparency and rules of settlement of condition based on G20 (Destais 2014b).

Domestic scholars also concern that central banks of six western countries lengthen the currency swap and do not set the quota. At present, there are two opinions; one is the more affirmative opinion, mainly represented by some scholars of People's Bank of China, such as Guan Tao and Ma Jun. They think that the arrangement of the added liquidity is built by central banks of developed countries through their own efforts out of IMF, and that it has a positive effect on stabilizing the financial markets of developed countries and global financial system. Before it, financial turmoil and crisis mainly takes place in the developing countries. Now, through the global financial crisis, the financial crisis of developed countries becomes the focus of attention. Once they take place the crisis, the fund of IMF cannot help. And only the main central banks of developed countries can cooperate, can they solve the problem. So the multilateral swap of the Federal Reserve, the European central banks, the bank of England, the bank of Japan, the central bank of Canada and the central bank of Swiss is the measure to stabilize the international financial market. These scholars think that China should join the swap system when the condition is mature. (Guan Tao, 2014; Ma Jun, 2014).

Jin Zhongxia (2014) thinks that the temporary bilateral agreement built after the financial crisis achieves institutionalization and diversification. The main effect may be: first is to stabilize the international financial markets; second is to keep the main reserve-currency status of the USD; third is to reinforce the existing pattern of the international currency system; fourth is to deal with the change of the global governance pattern. On one hand, each party involving in the swap promotes IMF reform. On the other hand, the establishment of currency swap network weakens the guidance effect of the IMF as a multilateral agency to the international currency system and the role of "lender of last resort".

Xu Yisheng (2013) thinks that the currency swap network with a core of the Federal Reserve provides the crisis with a new mode, but the choice of the Federal Reserve on currency swap reject the developing countries and the executing standard is not transparent. Even though, he thinks that China should discuss with USA to join the dollar swap network of the Federal Reserve to test the attitude of USA. He also thinks that if China and USA sign the bilateral currency swap agreement, it can become the important content of new pattern of relationship between great powers between China and USA.

Another opinion is relatively negative. Li Yang, the vice-president of Chinese Academy of Social Science thinks that the currency swap of central banks of six western countries is the prototype of the new international currency system, and that in the future, it will form a new international currency system based on the global multi-level currency swap. So, china should take it seriously and be actively involved in it, rather than have no regard for it (Li Yang 2013). Zhang Monan in international center for economic exchange thinks, "That the monopoly mechanism of dollar lender of last resort built by the currency swap agreement of six central banks of the Federal Reserve lengthens the currency swap mechanism with the core of USD. And it means that USA is building a new monetary union dealing with the rise of currency of the emerging economics. In fact, the exclusive and super network of supply and demand in the international reserve currency is formed, which is centered on Federal Reserve and the main central banks of the developed bodies participate in. This network has inherently integrated the money supply mechanism of the developed bodies." This judgment is basically correct, but the raised measure is inconsistent with the basic judgment: "Positively participate in the 'bilateral swap network' led by USA. At present, there are USD 3.95 trillion foreign exchange reserves in our country. As Japan, who has USD 1 trillion of foreign exchange reserves, presented currency swap with Federal Reserve (and ultimately achieve the unlimited currency swap), Central banks of our country should also present the currency swap with Federal Reserve. So, when our country really appears capital outflow and central banks need foreign exchange reserve to deal with, having currency swap with Federal Reserve makes our country have more flexible dollar position" (Zhang Monan,2004).

2. The "dual" influences of currency swap in western central banks on the reform of international currency system

For the domestic and international points of view, we think that from perspectives of admitting the existing situation, stabilizing international financial market and dealing with crisis, the above positive views related to lengthening and institutionalization of western central banks have a certain correctness. But these positive effects and influences are conditional, that is, when global financial system suffers from shock leading to the world economy into a severe recession, currency swap of central banks provides extra liquidity for them and becomes the edged tool to stabilize financial market.

Domestic scholars think that if swap network of central banks continuously extend s and forms a multi-level swap network, the future international currency system can form a new system according to this swap network. But we think that as its nature is to maintain existing situation and existing situation of dollar dominance, currency swap of six western central banks cannot bring the new international currency system and cannot promote reform of international currency system. The impact on this swap arrangement objectively is to prevent reform or delay reform. Because this swap provides extra standby liquidity out of IMF system, the reform scheme of IMF capital increase or increased share is shelved and reform of international currency system by IMF capital increase or increased share is delayed. The reason why United States Congress vetoed the resolution of capital increase and adjusting shares of member countries by IMF in December 2010 is that USA has the alternative selection.

The domestic scholars still expect that the emerging market countries can engage in the USD currency swap network or construct a new currency system by building their own currency swap networks. We think it is a good wish. It may build a multi-level currency swap network between emerging market countries in future, but it is impossible for many currencies to be as the international currency. Most currencies of emerging market countries are unable to be used extensively as the international currency while only in few countries the currencies may perform the function of the valuation currency and exchange medium, therefore, the multi-level currency swap network will not change the basic characteristics and natures of current international currency system.

The lengthening of the currency swap and the arrangement nature of the quota not set in the central banks in six western countries are to maintain the international currency system with the existing USD as the core, which may result that the defects in the international currency system are not overcome through such currency swap of central banks.

There are three defects in the existing international currency: I. The value of USD playing a role in international standard currency fluctuates continuously and sharply. The currency policy of Federal Reserve only depends on USA domestic economy needs and the function of USD as an international currency is also served for USA.④. All above situations result in that global financial market is shocked and disordered continuously with fluctuation of the USD value; II. The fluctuation between the main international monetary exchange rates has lost any restrain to contort the exchange rate to the normal state. The country, which holds the dominant right to issue the international currency, transferred arbitrarily out its costs of domestic economic regulation. With the regulation of the currency policy in the country issuing the international currency, global monetary exchange rate may fluctuate sharply to comply with expansion and contraction of global liquidity. The studies of many scholars have proved that the regulation period of the currency policy from Federal Reserve is the source to result in expansion and contraction of global liquidity, while such regulation also is the main factor to effect fluctuation of the financial market (Rey, 2013; Cesa-Bianchi, 2015)⑤; III. Without relevant rules, the regulation mechanism of the international balance of payment is generally maintained by short-term capital fluxion and capacity of the credit expansion in unbalance countries,

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Certainly, dollar also, objectively, provides world currency function with public goods nature for development of global trade and investment as international currency, and plays positive role in economic development after war. However, this can’t deny that USA objectively needs international currency function of dollar to serve for American interests. If the function is conflict with American interest, USA will take measures to change rules and/or change the obligations to be undertaken by international currency function of dollar. That USA stopped exchange of dollar and gold in August 1971 and didn’t support exchange rate of dollar anymore is an example, USA opposed increase in SDR amount issued to prevent international currency function of dollar from eroding in the 1980s is an example. And that USA vetoes the IMF’s share increase is an example. If they know about a series of measures on IMF dealing with dollar crisis led by USA in the1960s and the whole experience of suppressing Yen appreciation in the 1980s, they cannot deny that USA maintaining international currency functions of USD centers on the principle that benefits of USA is the first.

⑤ There are different perspectives on that level of exchange rate among main currencies being distorted is the defect in international currency system in educational circles, because liberal economists think that the exchange rate decided by markets is the correct exchange rate. The problem is that owing to institutional factors and inappropriate intervention of government, the supply-demand relationship is distorted, and this leads to adjustment in the form of crisis. Only if supply-demand relationship of markets is relatively normal and from long-term perspectives, that exchange rate is decided by markets is correct. Otherwise, scholars of USA do not discuss the problem of exchange rate manipulation and international society does not have to discuss the present international exchange rate system. It can be decided by markets. Scholars insisting on floating exchange rate try to prove that floating exchange rate is decided by markets. But the problem is that USA impacts exchange rate level of USD by adjusting the currency policy. And this makes other countries in a passive adjustment and shocks their economies. This is the real reason why Calvo and Reinhart find that many developing countries “are afraid of floating”, but they cannot explain why they continue to focus on exchange rate system (Calvo and Reinhart, 2000).

resulting in continuous unbalance accumulation and then enforcing adjustment through the great fluctuation of the crisis and market to increase the adjustment costs. All above defects added together are the main reasons for continually occurring of the international crisis. For such reasons, the international society continually appeal and accelerate reform of the international currency system.⑥. The currency swap of the central banks in six western countries neither modify and improve the said main defects in any level nor provide any method to reform the said main defects. The currency swap in the central banks provides cushion for remitting crisis impact and reduce the relief methods of impacting negative effects. From the view of reform of the international currency system, this effect is just negative for the reform. With the crisis impact as a driving force for promoting the reform, the greater the destructive force is, the easier the consensus to promote the reform will be reached.⑦

It may be just the standby credit to use in theory when the crisis happens, therefore, USA consider that it is necessary to reduce the expansion of IMF capital. United States Congress refused to approve the resolution to increase funds shares for IMF board of directors in 2010 or adjust funds shares for the members. Such results in that it is unable to implement the reform for most countries in the international society.⑧Therefore, it is reasonable to believe that USA try to use the currency swap in the central banks in western countries to delay the reform for IMF and international

⑥ For the problem in mechanism of adjustment of balance of payment, I have explained in related papers about the relationship of the outburst of Southeast Asian Financial Crisis and defects of international currency system. But some scholars still think that adjustment of balance of payment is adjusted by the short-term capital movement and expansion of national credit is misjudgment. It is necessary to explain here. For most of non international countries of currency issue, after appearing adverse balance of international payment, if they are unwilling to adjust through domestic deflation policy, they must maintain by short-term borrowings and other short-term capital inflow. And this leads to the depreciation of currency exchange rate, and even financial crisis in the following years. For issuing country of international currency, it depends on the degree of the expansion of currency issue supported by national credit, that is, it can maintain what extent through issuing currency to remedy. For the main international countries of currency issue, USA, as long as national credit has no problem, adverse balance can continue to expand. But for some member countries of Eurozone, the expansion of adverse balance of international payment may trigger debt crisis. Out of the obligation of maintaining fixed exchange rate under Bretton Woods System, deficit countries are unwilling to maintain external balance by deflation. For the main international countries of currency issue, USA, pushes the responsibility of adjustment to surplus countries, and suppresses the currency appreciation of surplus countries to achieve the adjustment of imbalance of international payment. Surplus countries emphasize that without the limit of international agreement, they are unwilling to undertake the obligation of adjustment by national currency appreciation. There is an internal connection between the distortion of mechanism of adjustment of balance of payment and the aforementioned distortion of exchange rate level. And that this problem is discussed in this paper is beyond the subject of this paper, so I shall not give unnecessary details here.

⑦ The reason why this paper analyses the relationship of currency swap of western banks and reform of international currency system and comments the influence of currency swap of central banks to reform of international currency system from objective perspectives, is that some scholars have put forward the opinions of this aspect and that they have the necessity to further clarify and research. Some scholars think that currency swaps of central banks establish a new currency system and promote reform of international currency system. This paper denies the effects to reform of international currency system, and does not deny the positive effect of currency swap of central banks to financial crisis relief. But the effects of crisis relief and promoting reform of international currency system are not same.

⑧ In 2010, the resolution of IMF board of directors is related to two main contents, first is adjustment of IMF share proportion in member countries and reduction of unreasonable and excessive share proportion of developed countries (most are European countries). If adjustment is done according to the proportion, China will rise to 6.390% from current 3.996%, the voting right will rise to 6.068% from current 3.806%, and then become the third country with large share and voting right next to USA and Japan. Second is double increase of IMF fund share from current 238.4 billion SDR to 476.8 billion SDR. All member countries will increase capital in IMF according to proportion. Since capital increase in international organizations is related to the law approval procedure of USA, which must obtain approval of United States Congress. United States Congress doesn't approve, and the resolution can't come into effect. Capital increase and share adjustment belong to major items of IMF. According to IMF articles of association, major items can come into effect only with 85% voting right. While, USA has 16.6% voting right, so USA has vetoed in major items actually.

currency system in fact.[⑨]

The lengthening of the currency swap and the quota not set in western central banks also may lead to a serious problem that such currency swap without setting quota theoretically provides a green channel for one of central banks to borrow money from other five central banks. In case that the loan has no precondition as scholars analyzed, it is possible for such currency swap to be kidnapped by the irresponsible monetary policy from one of the central banks. If there is no method to restrain the ethics risks, this currency swap always makes the central bank in each country to increase passively issuing currency which will cause inflation; it will result that one of central banks refuses to continuously provide liquidity, so that it is unable to maintain the alleged swap without any quota or term in the end.

Of course, from the view of the second-best choice, there are also active meanings for the currency swap in the central banks in six western countries. It provides a relatively flexible capital pool intervene in by the market to increase quickly the capital scale, and available liquidity to remit the crisis impact and help some countries under the crisis impact, when the possible international financial crisis happens in future. It is the reason that the western mainstream media give high comments for the currency swap in western central banks.

V.RMB internationalization, the domestic currency swap of People's Bank of China and the reform of the international currency system

1. Basic development of RMB internationalization

The global financial crisis during 2008-2009 exposed the defects of the international currency system with USD as the core. The international society realized that it was necessary to reform the international currency system. G20 Summit mechanism was born for this reason, which played a significant role in government of the global economy, especially in promotion of the international currency and the reform of the financial system, and also had obtained the most valuable evolution on promoting the reform since the Bretton Woods System crashed. However, it is no any change for the basic framework and the core contents of the existing system. The essence of the

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[⑨] There are scholars who suppose that Federal Reserve-oriented USD currency swap delays IMF and international currency system reform has inadequate proof. In fact, we can make such a judgment from the attitude change that USA treated IMF capital increase and release increase of SDR. After global financial crisis was brought by USA subprime mortgage crisis, USA acted out of the previous opposition attitude to positively support adjustment of IMF share and release increase of SDR. However, with the crisis was subsided, Federal Reserve will not support IMF capital increase and new schemes and recommendations increase of SDR anymore, following temporary currency swap in crisis becomes the currency swap without term and quota of central banks of five main western countries. Therefore, we believe that such a basic judgment made here is to the point.

international currency system led by USD has not any change but reinforcement to a certain extent. The main reasons depend on not only that USA as the major vindicator of the system does not want to promote the reform, but also that the suggestions and assumptions of various reforms are far away from the reality, impossible to obtain the support from most countries. It is very extensive for the range and contents included in the reform itself. Each suggestion can affect the complicated interest relationships among countries in the world, so it is difficult to achieve the consensus in the international society. Therefore, it just obtains the evolution to build the international Financial Stability Board, reinforce the supervision of the international financial market, expand DSR assigned limit, and adjust IMF shares and the voting right. Even on the reform of the IMF limit, the decision of IMF board of directors in 2010, refused by United States Congress, has not been carried out until now.

For this reason, the pattern of the diversified international reserve currency happening after the Bretton Woods System crashed, will develop further and become lengthening processes. At the present, the currencies of some emerging market countries, except of the currencies of major developed countries, also become the international currencies, and RMB is going in the direction. The international finance will be subject to continuous turmoil and adjustment in the process of USD value changes and adjustment of currency policy of Federal Reserve. The ability of the market intervention is the key factor to maintain the currency system when the market turmoil and impact happen. IMF is lack of aid funds which is difficult to arrive timely in place when emergency payment happens in member countries. The currency swap of the western central banks with USD as the core provides supplementary liquidity to allay the market turmoil to an extent, which plays an active role in the stabilization of the international financial system. However, the currency swap is just a local security network of central banks among western countries, and also a steady mechanism with USD as the core. For the needs of financial stabilization of most emerging market countries, the mechanism of the currency swap of the western central banks has certain negative externality. Other forms of the currency swap become a new choice under the great diversified development tendency of the international currency.

In such situation, RMB internationalization becomes the most important and remarkable development tendency of the international currency system in recent years. Chinese Government promotes formally RMB internationalization in 2009. In July of that year, *the Pilot RMB Settlement in Cross-Border Trade* was promulgated jointly by

People's Bank of China, Ministry of Finance, Ministry of Commerce, General Administration of Customs, and State Administration of Taxation. The main purposes were to reduce risks of exchange rate changes in import and export enterprise in China by RMB Settlement in Cross-border Trade, and avoid impact to import and export enterprise in China caused by USD exchange rate. Since 2009, cross-border RMB trade settlement has rapidly increased. In 2010, scale of RMB trade settlement of China increased to RMB 506.3 billion which increased by 58 times than that of 2009; it was up to RMB 2.08 trillion in 2011, RMB 2.94 trillion in 2014 and rapidly up to RMB 4.63 trillion in 2013. In 2014, RMB trade settlement was high up to RMB 6.55 trillion which increased by 41.5% of 2013.

Direct purpose of RMB internationalization is to protect domestic importer and exporter from the risk of exchange rate fluctuation, but apart from this, there is longer strategic object that aims to cope with the defect of current international currency system and to protect international financial benefit of China. From a long term, pushing RMB to walk out will scatter our risk in international financial asset and avoid value loss in overseas financial asset, especially in extreme condition, avoiding the damage of breaching promises of USA is also an important strategic object of RMB internationalization. Through more than 30 years hardworking, our country collects nearly USD 4 trillion foreign exchange reserves. At present, these assets are kept in the form of government bond of international currency issued countries, in which USA government covers the most parts. As depreciation of USD and other foreign exchange reserve of issued country currency, our financial asset value will lose in overseas. Therefore, pushing RMB internationalization and letting RMB walk out of domestic door become calculation currency of investment in overseas, which not only can turn our “soft asset” into “hard asset” of overseas like mineral resources, land and ownership of authorized economic operator, etc., but also can make our overseas asset avoid from the loss caused by depreciation of foreign exchange. Form a longer term; it can make RMB be international reserve currency which can share incomes of international currency issue.

2. RMB internationalization and the development of RMB currency swap

With the increase of the RMB cross-board trade settlement, RMB has become the seventh biggest transaction currency and the fifth biggest payment currency of international financial market. RMB’ offshore market extend from Hong Kong to London, Frankfurt, Singapore, Seoul and a payment and settlement system covering globe is being formed. But because RMB has not been fully free exchanged, the way to acquire RMB is limited. At present, to gain RMB mainly by Chinese transaction. Therefore, for the national central banks that are willing to obtain RMB capital, besides through borrowing money and releasing RMB bonds in HongKong and other offshore RMB market, it is difficult for them to obtain RMB. As a result, to obtain RMB from China central bank is becoming an option by the domestic currency swap agreement between central banks of host country and People's Bank of China. However, not for performing the agreement of financing, but for the purpose of handling with financial turbulence, standby credit is established in most of the domestic currency swap agreements. The main purpose of currency swap is not to let RMB outflow and become the circulation currency in the world, but help the countries signed domestic currency swap with People's Bank of China to intervene in their market and stabilize the financial system, realizing the function as the central bank in western countries is. The impact RMB currency swap on promoting RMB internalization is indirect and consequential, and underlying. Not like what most of people think, its main purpose to directly use the capital under swap agreement as the international trade and investment.

However, RMB currency swap agreements of central bank deliver important boost to the usage of RMB by enterprises and individuals in its country, because the signing of RMB swap agreement by a central bank means the central bank of the country accept RMB as crucial intervene in currency of market and standby reserve method. Therefore, RMB’ credit gets guaranteed in its market. This will greatly raise the enthusiasm of using RMB by those countries’ enterprises and individuals and cultivate the concept that regards RMB as acceptable transaction currency. In general, it is necessary for the countries signed bilateral swap agreement to further sign side agreement which allow the parties to transact and exchange currency in their own financial markets. For RMB, it means the gradual opening of free exchange of RMB and Chinese financial market in certain direction. For example, China permits the direct exchange between Australian dollar and RMB in trading market among banks before the signing of currency swap agreement with Australia. Because RMB is gradually treated as trade settlement method, the capital of RMB trading account can invest financial products among banks. If needed, those products are allowed to be directly exchanged into Australian dollar.

RMB, which has been fully convertible, enjoys much popularity among other countries and intends to be the potential reserve currency. That benefits from stable RMB value and its appreciation potentiality. In addition, the rapid development of Chinese economy enables the actual return on Chinese financial asset higher. For example, the return on investment of Chinese national debt with small risk is relatively stable and the return is higher than that on bond of main developed countries. All of above-mentioned contributes to the prevalence of RMB assets. When RMB gradually presents to be the valuation methods and exchange medium among transnational trade and financial transaction, the central banks of some countries have strong desire to hold RMB.

China has sighed currency swap agreement (RMB/domestic currency) with 30 countries (regions). For china, the main meaning is not to obtain standby credits for a rainy day, but increase the international level and internationally acceptable level of RMB. More importantly, it breaks the pattern of American international currency system formed by multicurrency swap network based on USD.

From the perspective of time, China first signed currency swap agreement with Korea in December 2008 in the form of domestic currency worth RMB 180 billion/WON 38 trillion, which made it possible that RMB acted as consideration of currency swap (the agreement is renewed in 2011, reaching RMB 360 billion). Since Chinese government promoted the RMB cross-border trade settlement in 2009, the number of signing swap agreements with China in the form of domestic currency has increased. So far, China has signed currency swap agreements with 31 central banks of countries and regions, whose swap amount reached RMB 3 trillion. Those central banks are as follows: Central Banks of Korea, Hong Kong, Malaysia, White Russia, Indonesia, Argentina, Iceland, Singapore, New Zealand, Uzbekistan, Mongolia, Kazakhstan, Thailand, Pakistan, United Arab Emirates, Turkey, Australia, Ukraine, Brazil, British, Hungary, Albania, European Central Bank, Switzerland, Sri Lanka, Russia, Qatar, Canada, Surinam, Armenia and Chile ,etc（See Table 2 of detailed swap agreement）

Table 2.The countries signed RMB currency swap agreements with China

No.	Country	Date	Swap amount	Remarks
1	Central bank of Korea	November 12, 2008	RMB 180 billion/WON 38 trillion	Renewed in 2011 and reached RMB 360 billion/ WON 64 trillion.

				Renewed again in October 2014
2	Monetary Authority of Hong Kong	January 20, 2009	RMB 200 billon/HKD 227 billion	Renewed in November 22, 2011 and reached RMB 400 billion/HKD 505 billion. Renewed again in November 27, 2014
3	National Bank of Malaysia	February 8, 2009	RMB 80 billion/ Ringgit 40 billion	Renewed in February 8, 2012 and reached RMB 180 billion/Ringgit 90 billion
4	National Bank of White Russia	March 11, 2009	RMB 20 billion/ White Russia Ruble 8 trillion	Renewed 3 years in May 10, 2015 and reached RMB 7 billion/ White Russia Ruble 16 trillion
5	Bank of Indonesia	March 23th, 2009	RMB 100 billion/Rupee 175 trillion	Renewed in October 1st, 2013
6	Central Bank of Argentina	April 2, 2009	RMB 70 billion/ Argentine Peso38 billion	Renewed in July 2014
7	Central Bank of Iceland	July 9, 2010	RMB 3.5 billion	Renewed in September 30, 2013
8	Monetary Authority of Singapore	July 23, 2010	RMB 150 billion/about Singapore dollar 30 billion	Renewed in March 7, 2013 and reached RMB 300 billion
9	Reserve Bank of New Zealand	April 18th, 2011	RMB 25 billion	Renewed in May 22, 2014, 3 years of validity
10	Uzbekistan	April 19, 2011	RMB 0.7 billion	3 years of validity. Extended as the parties agree
11	Central Bank of Mongolia	May 6, 2011	RMB 5 billion	Renewed in March 20, 2012 and reached RMB 10 billion
12	National Bank of Kazakhstan	June 13, 2011	RMB 7 billion/ Kazakhstan Tenge 2,000	Renewed in December 14, 2014. 3 years of validity
13	Bank of Thailand	December 22, 2011	RMB 70 billion/ Thai baht 320 billion	Renewed in December 22, 2014, and reached PMB 70 billion/Thai baht 370 billion
14	National Bank of Pakistan	December 24, 2011	RMB 10 billion/Rupee 140 billion	Renewed in December 23, 2014, and reached RMB 10

				billion/ Rupee 165 billion
15	Central Bank of United Arab Emirates	January 17, 2012	RMB 35 billion/Dirham 20 billion	3 years of validity and has not been renewed so far
16	Central Bank of Turkey	February 21, 2012	RMB 10 billion/Turkish lira 3 billion	3 years of validity and has not been renewed so far
17	Reserve Bank of Australia	March 22, 2012	RMB 200 billion/ Australian dollar 30 billion	Renewed in April 8, 2015 RMB 200 billion/ Australian dollar 400. 3 years of validity
18	National Bank of Ukraine	June 26, 2012	RMB 15 billion/ Ukrainian hryvnia 19 billion	3 years of validity
19	Central Bank of Brazil	March 26, 2013	RMB 190 billion/ Brazilian Real 60 billion	3 years of validity
20	Bank of British	July 23, 2013	RMB 200 billion/ Pound 20 billion	3 years of validity
21	Central Bank of Hungary	September 10, 2013	RMB10 billion/Hungary Forint 375 billion	3 years of validity
22	Bank of Albania	September 12, 2013	PMB 2 billion/ Albania Lek 35.8 billion	3 years of validity
23	European Central Bank	October 9, 2013	RMB 350 billion/Euro 45 billion	3 years of validity
24	Central Bank of Switzerland	July 21, 2014	RMB 150 billion	3 years of validity
25	Sri Lanka	September 17th, 2014	RMB 10 billion/Rupee 225 billion	3 years of validity
26	Central Bank of Russia	October 31, 2014	RMB 150 billion/Rouble 815 billion	3 years of validity
27	Central Bank of Qatar, , ,	November 3, 2014	RMB 35 billion/ Rial 20.8 billion	3 years of validity
28	Central Bank of Canada	November 8, 2014	RMB 200 billion/Canadian dollar 30 billion	3 years of validity
29	Central Bank of Surinam	March 18, 2015	RMB 1 billion/Surinam 520 million	3 years of validity
30	Armenia	March 25, 2015	RMB 1 billion/ Armenian dollar 77 billion	3 years of validity
31	Central Bank of Chile	May 25th, 2015	RMB 22 billion/ Chilean peso 22,000	3 years of validity
	Total amount		RMB 2.5012 trillion	RMB 3.1232 trillion

				with added amount after renewal

From：People's Bank of China⑩

Because the RMB currency wrap agreements between People's Bank of China and other national banks is basically not really implemented and lack of public report concerning how the interest rates of RMB currency wrap agreement is confirmed, it is difficult for us to judge the pricing basis. However, according to the international practice, currency swap as concessional credit, the user should afford certain interest rates. Consequently, if other national central bank employs the RMB capital under currency swap agreement, it is required to pay interest to People's Bank of China at the expiry. If we employ the other's capital, we need to pay equal interest. Undoubtedly, it is concessional credit whose interest rate is rather lower than market interest rate. Because RMB has not been fully internationalized, the pricing basis of currency swap interest rates of People's Bank of China and other countries' will not refer to the domestic base rate of loan set by People's Bank of China or Shanghai Inter Bank Offered Rate(SHIOR). It is likely to refer to London Inter Bank Offered Rate（LIBOR）. There is a misperception about People's Bank of China that some developing countries' monetary exchange rates are sharply depreciated. Provided that those countries' currency is depreciated, if they change domestic currency into RMB, we will take the exchange rate risk. Actually, there is no need to worry that because currency swap is simply a form which is a short-term credit in essence. The usage of domestic currency symbolically provides consideration guarantee, the credit is still paid by RMB at the expiry. For this reason, the currency swap of central banks shall not involve the risk caused by changing monetary exchange rates. The currency swap of central banks is not the foreign exchange swap or currency swap transaction conducted by commercial banks. The relevant parties carried out the transaction will confront with corresponding risks caused by changing the exchange rates.

⑩ The bilateral domestic currency swap agreements signed by People's Bank of China with other central banks before the start of 2012 are usually valid for 3 years and renewed at the expiry. At present, those agreements have expired, but People's Bank of China has not published the information concerning renewal and extension of time on its website. The three central banks belong to Uzbekistan, United Arab Emirates, and Turkey. It is possible that People's Bank of China is consulting to renew agreement with the other or they have reached consensus to renew but not release it to public. Now, this kind of information is absent.

3. RMB currency swap and the reform of international currency system

RMB' internationalization is the offspring of increasingly improved diversification of international currency after the collapse of Britton Woods System and also the inevitable result after Chinese economy enters a new stage. As important grasp on RMB' internationalization and critical content, the currency swaps between People's Bank of China and central banks of 31 countries(regions) directly expand the range of RMB internalization and lay solid foundation for those countries to hold RMB assets and promote RMB to change from international settlement currency to reserve currency. The currency swaps between People's Bank of China and other central banks are of great significance for the reform of international currency system.

Firstly, it breaks the exclusiveness of currency swap network based on USD. In addition, it plays an important role in helping emerging market countries exert influence on international currency system and maintain own interest (Shen, 2013). USA together with main countries signs currency swap agreements without quota and time limit on the purpose of restraining other currencies to challenge USD. Euro, Pound, Yen, Canadian dollar and Swiss franc have been brought into system assisting to stabilize USD. Even if they can also become the international currency in a certain scope and degree, they cannot challenge the dominating position of USD. However, the developing tendency of diversifying international currency is propelled by objective laws. The exclusive currency swap of western central banks cannot contain the rise of the emerging market countries. On the contrary, it accelerates the process of RMB internalization. Despite that RMB internationalization .shall not replaces USD as main international currency in the foreseeable future, the reality of increasing RMB and exerting much impact in existing international currency is undeniable.

Secondly, although the currency swap of People's Bank of China does not catch up with the currency swap of central banks in six western countries in the scale, it has far surpass the latter in respect of objects and quantity involved in currency swaps. This kind of inclusiveness received widely praise in international society. It better explains that the reform of international currency system should satisfy the needs and interests of most countries and promotes the reform of international currency system.

Finally, the currency swap of People's Bank of China and China actively promote Development Banks of BRICS, Emergency Reserve of BRICS. These measures correspond with Asian Infrastructure Investment Bank, which will drive the pace of reform of international financial system in the aspect of competition. In spite that

USA attempts to monopoly the set of rules of financial rule of international currency and discourse right, it have to adapt the evolution of new power pattern, make partial adjustment and concession, stimulate the development of international currency system. Because the emerging market countries build a complementary and competitive mechanism beyond the original system which will certainly remind developed countries to emphasize on the demands of developing countries.

Undoubtedly, the RMB swap between People's Bank of China and other countries' central banks and the dollar swap leaded by Federal Reserve are the transitional measures in the process of reforming international currency system. Those measures cannot solve the current problems and defects. The prevalence of currency swap of central banks further illustrates the necessity and urgency of building broad mechanism for cooperation. In the future, based on G20, global society should advance cooperation between developed countries and emerging market countries with IMF as platform. Moreover, global society shall also pay enough attention to the stability of international currency financial system and the establishment of relevant rules and institution.

RMB currency swap also presents to be risky. At present, currency swap signed by People's Bank of China almost are not implemented. People's Bank of China only used the currency swap with Korea as transaction method, whose approach is central bank of Korea transfer the RMB gained from People's Bank of China to commercial banks and commercial banks regard RMB as trade financing of Korean enterprises used for importing Chinese commodity. However, China uses WON which People's Bank of China obtains from the bank of Korea and then loans it to Bank of Communications as capital supporting the cross-border settlement and swap of RMB in Seoul. But with the increasing number of countries involved in currency swap and the reality of other countries using RMB capital, it is possible that some countries use RMB swap capital as long-term credit which will change the nature of RMB as short-term loans. Those countries are faced with relatively difficult balance of payments and intense foreign exchange capital. Besides, if RMB swap capital are in long-term usage, the lack of corresponding guarantee mechanism several breach may appear, although infrequent. No exclusion of this circumstance. This is the potential risk all currency swaps of central banks will confront with. Because RMB currency swap covers more broad regions with more developing countries, it is more likely to meet with risk. Therefore, international cooperation and other measures are expected to follow up and manage the usage of currency swap capital during the actual implement.

VI.Several conclusions and policy thinking

In accordance with the above mentioned research, several basic conclusions shall be drawn.

Firstly, although it is very urgent and important for international society to make international currency system reformation, there exist many different opinions between developed countries and developing countries in terms of its detail contents and its important carriers IMF in dealing with structural reform. In the process of dealing with crisis, central banks in the developed countries with Federal Reserve at the core make market intervention by fully utilizing additional liquidity provided by currency swap, which plays an active role in stabilizing the market. In order to maintain the basic pattern and structure in the existing international currency system, six central banks in the developed countries constantly changed their currency swap into a currency swap network with no quota in the indefinite future, and build a financial security network besides its IMF system.

Secondly, the nature of currency swap in six western countries is to maintain the stability for the current international currency system. However, no reformation content is proposed on the primary mechanism in connection with current international currency system. In this case, it is difficult to overcome the main defects in the existing international monetary system. The value of standard currency is unstable, and major international currency exchange rate sharply fluctuates. Thus the failure and distortion on adjustment mechanism of international balance of payment shall not be relieved by the currency swap in the central bank. The main role played by currency warp is only to provide support in dealing with crisis impact, and offer comparatively flexibility for the central bank in the major country after crisis broke out.

Thirdly, for the reason that the currency swap is established with Federal Reserve at the core, the security area provided is definitely limited. If the market unrest occurred in the most developing countries, the currency swaps system of central bank in the developed countries shall not provide and expands money to help the central bank in these countries to intervene in and stabilize the markets. Money required by developing country shall be obtained from IMF and other bilateral channel. Therefore, IMF still plays an irreplaceable role in this respect.

Fourthly, Currency swap object selected by Federal Reserve shall meet certain conditions. After crisis of 2008, Federal Reserve once signed with 14 countries, all of which belongs to developed countries and the member countries of OECD[11]. Those who propose to build a central bank currency swap system in worldwide area neglect such selectivity of Federal Reserve. Some developing countries rejected by USA attempting to build currency swap system with USA. This means that when most developing countries require money, they shall not be able to obtain help[12] from IMF.

Fifthly, the central bank currency swap system could not become the lender of last resort mechanism. Through in the international it is suggested that multi-level central bank currency swap system shall be incorporated to form the lender of last resort mechanism(Truman，2013；), there is no corresponding system to inhibit risk in the central bank currency swap system. Thus relevantly transparent supervision and restraint are impossible be established. Let alone the corresponding national bankruptcy mechanism. The general currency swap system just exists on paper. For the currency swap on bilateral basis, it is impossible to comply with the agreed principle and criterion. Given that some G20 principled stipulation shall be made on central bank currency swap（Destais, 2014b）, it is also impossible to be observed widely.

Sixthly, currency swap between RMB and domestic currency promoted by People's Bank of China plays a similar role in providing supplementary liquidity in dealing with market unrest. The RMB currency swap characterizes widely coverage in the world. This offsets the highly selectivity of the Federal Reserve currency swap. It is beneficial for most developing countries. However, it may arise some risk. If liabilities is much heavier and the countries that foreign currency is of shortage shall utilize the money under the currency swap agreement to compensate their capital demands in the long term. Then it may result in the crisis of supplying RMB credits. At present RMB currency swap plays a vital role in improving the international prestige and promoting RMB internationalization. It provides shortcut for the RMB as the reserve currency in these countries. To some extent, it also guarantees that economic subject will adopt RMB as the medium of exchange.

Seventhly, the development of currency swap plays a positive role in the reformation

[11] See notes2 in this paper.

[12] In 2008, Federal Reserve rejects the swap requirements proposed by Peru. Developing countries is not qualified as the rival of currency swap in the examination and approval conducted by Federal Reserve.

of international currency system. Since it shall promote RMB internationalization, and boost international currency diversification. Consequently, it shall change imbalanced pattern that U.S.D is powerful but reluctant to bear corresponding responsibility the current international currency system. However, we shall not overestimate the role of RMB currency played in building new international currency system. Before RMB becomes one of major international currencies, the role carried out by currency swap between People's Bank of China and other central banks in each country shall not replace the role of currency swap between Federal Reserve and central banks in western countries. It shall not replace the function realized by IMF in stabilizing global financial market through providing liquidity.

Based on above basic judgment and conclusions, we conclude that Chinese government has come to a deadlock in face of the reform of international currency system. For overflow effect of currency swap between Federal Reserve and central banks resulted from its infinite quantity in the long term, the following several aspects of measures shall be taken:

Firstly, to promote RMB internationalization with a steady pace, more attention shall be paid to its effectiveness and practical interest. Corresponding measures taken to promote RMB internationalization shall comply with our international economic benefits in accordance with the practical interest in the process of international trade and international investment conducted by our country. We shall not act it just for the realizing RMB internationalization. At present, emphasis shall be put in enlarging RMB evaluation and settlement in international trade in order to reduce and avoid the risk of exchange rate for importers and exporters. During financial transaction, focus shall be attached to encourage all kinds of overseas economic subject to release bonds evaluated by RMB. In the short term, domestic financial markets shall not be fully opened just only for realizing RMB internationalization and without careful consideration.

When we expand overseas market for RMB, it shall be based on the requirements of real trade and investment entity to conduct economic activity, service provided to promote China's merchandise exports and China enterprise to go out, favorable credit conditions provided by the Export and Import Bank of China and China Development Bank to overseas enterprise. The impacts of RMB currency swap of central bank on promoting trade and investment shall not be overestimated. The nature of currency swap is to provide standby credit under emergency circumstances. It is mainly used as the means to intervene in market. If it is frequently used as payment terms, it shall dissimilate the function of central bank, and be regarded as a place to provide loan with low interest. Thus it will cause damage to our interest[13].

Secondly, do not attempt to participate in western currency swap network with Federal Reserve as the core. For the currency swap in the bank of six western countries, it is necessary for us to participate, and we have no lack of USD. Even when it is required to be intervene ind market, what foreign exchange reserves we possess is large enough to handle with. If we are participated in this swap network, we shall bear the responsibility to provide RMB to them. This does not conform to our benefits. Through we hope that international financial market shall not arise unrest in the short term, we also hope that no dollar crisis erupted again.

Thirdly, actively participate in the cooperation of global financial governance among G20, and promote code of central bank currency swap. Firstly, the important matter involved with the principle, transparency, and its relationship with IMF and others, shall be discussed. Then international norm shall be established. Meanwhile, more importance of intervention from developing countries shall be attached, including that developed countries shall provide help for liquidity demand of developing countries.

Fourthly, firmly maintain mechanism provided by the changeably international liquidity on basis of IMF. The liquidity requirements of intervening and stabilizing markets are met by strengthening IMF capital scale. Urge United States Congress to approve IMF reform program of increasing share in 2010 as soon as possible so as to expand IMF capital scale effectively, which provides liquidity support for more member countries when it is necessary.

Fifthly, continue to strengthen the cooperation with emerging market countries. Beginning with the emerging international financial institutions such as Asian

[13] The basic function of central banks are to issue a uniform currency, with the two goals of promotion of price stability and stimulation of genuine growth of economy by regulating and controlling monetary policy. At home, they are known as the bank of commercial banks. Generally, what services they provided are surrounded with the goal of monetary policy, such as providing loan, and other service for commercial banks. The loan of central banks shall not have direct connection with trade investments. From the view of its promotion of RMB internationalization, through currency swap it shall provide convenience for helping to support liquidity among central banks from the "going out" of RMB, certain protection for host country to receive RMB and expand the use of RMB as payment currency, and accelerate the potential function of RMB as international reserve currency. However, central banks shall not directly provide financing for trade and investment. When swap money of central banks is treated as the financing institute for trade and investment, it may generate positive effect on the RMB internationalization. However, it is not appropriate. For the export credit is responsible by Export and Import Bank of China, project loan is responsible by China Development Bank. If People's Bank of China provides RMB credit used for the purpose of economy, it may be resolved by short-term credit in the central banks. We shall not mix it with currency swap; otherwise it may incur a serial of problems. For it is easy for currency swap be used as standby credit in the short term, but when it is involved with international loan used for trade and investment and other goal related to economy, its nature shall be changed into credit-aiding. In this case, central banks are not responsible for it. It shall be responsible by other sectors of the government, and the related stipulation is complex for it. In this sense, if currency swap is dissimilated as foreign loans of People's Bank of China, then the function of People's Bank of China shall be dissimilated.

Investment Bank, BRICS Development Bank, contingency fund of BRICK countries etc, expand the cooperation area and range of monetary and finance. For example, establish cooperative contingency fund with eastern and central European countries, and establish emergency firewall of financial market with eastern and central European countries; promote the transition from East Asian common reserve to East Asian monetary fund; and discuss the possibility of regional monetary cooperation fund with central and west Asia countries, and on the basis of reaching an agreement, establish monetary cooperation fund between China and central and west Asia countries. These cooperation initiatives can be seen as one of concrete content about “the Belt and the Road” construction, and also can be seen the component of strategy for whole China stabilizing international financial market and promoting the internationalization of RMB.

Sixthly, continue to implement international currency system reform. When striving to make RMB enter into SDR currency basket, at the same time, the impact of SDR shall be improved. SDR shall become the “currency anchor” or “value anchor”. This lay a foundation for building a stable international currency system.

Seventhly, reinforce the cooperation with European countries, and complete international financial supervision system. Correct the appeal that free movement of capital and liberalization capital market in the form of fundamentalism, and guarantee that government carry out the flow of capital, the control of foreign exchange and the right of capital transaction tax.

Eighthly, reinforce and complete domestic financial market system and mechanism, and provide a healthy financial service for the development of substantial economy, suppress the expansion of financial bubbles, control financial risk. The history and practice told us that when financial risk of a country accumulated to certain extent, it may occur under the impact of external factors from international financial market. It is possible that financial crisis spread from outside to the heart of a country. At this time, if domestic financial market is comparatively healthy, then it shall suffer a little impact and it is easy to control. Otherwise, in may arise larger upheaval. Therefore, when we promote the reform of international currency system reform, we also need to strengthen our domestic financial system. RMB internationalization shall be combined with the improvement of domestic financial system.

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