Notable Features of 2008 Financial Crisis and Directions of Adjustment by the Korean Economy

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Some notable features of 2008 financial crisis have been observed alongside with the comparison of what have been done in response to it with those of 1998 Asian financial crisis. Asymmetries between U.S. as a debtor with key currency privilege and other debtors without the original fortune were observed. It is further noticed that the asymmetries would be altered with the 2008 financial crisis as U.S. became even bigger debtor with the crisis not only to others but to herself. A few measures have been proposed to reduce the asymmetries. It was thought what were required to Asian debtors of 1998 had to be applied similarly to the debtor U.S. Massive inflation from many stimulus packages of nations was expected. It would surely lead to dollar depreciation, and it is speculated that the depreciation would resolve quite much of current global imbalance *via* de facto hard landing.

Keywords: Financial crisis, Global imbalance, Key currency, Depreciation

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I. Introduction

This essay considers the notable features of 2008 global financial crisis originated from the U.S. sub-prime mortgage crisis of 2007 and then seeks how Korean economy as one of the East Asian Economies should adjust to it. In a general sense, East Asian economies have done well in terms of growth, inflation, and balance of payments up to the global financial crisis. With some external exchange reserves they

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have been major players in sustaining the global imbalance associated with U.S. economy. In spite of the dispute on the excessiveness of foreign exchange reserves in individual economies and serious worry on hard landing in the way of resolving U.S. cumulative deficits of balance of payments, East Asian economies including Korea continued to keep lending real resources by means of positive current account balance. They also passively accepted what were going on in American finance industry including complicated trading of so called derivative products.

All of sudden, this picture was made to change due to the global financial crisis of 2008. Korean economy could not avoid direct influences from the decline of the value of financial products they bought from U.S. financial firms and indirect influences from the decline in global demand and the alterations in interest rates, stock prices and exchange rates. Hence, it turns necessary to ponder about how the Korean economy will be affected by the spilt-over crisis and how she should respond to it.

In Section 2, a few notable features of U.S. financial crisis and her handling of the financial crisis are examined. The handling altered de facto financial architecture maintained up to 2008; almost removal of the investment banks, a new posture arising from the previous market-first-ism of neo-liberalism to the active government involvement in the form of ad hoc rule changes in central bank's help to financial sector, and then the hasty decision by administrative part of government to use public money being echoed by legislative part thereafter. In Section 3, with the yardstick of old safety net in domestic finance, the responses of U.S. authority is compared with those materialized in the Asian financial crisis of 1998. In Section 4, the effects of the crisis to Korean economy are examined. A few arguments explaining why East Asian economies continued to retain large external reserves are recalled and re-cast to see whether the reason for it would still be maintained. Based on these considerations and especially on the differences between U.S. and non-key currency economy like Korea, a few long term considerations are recast in Section 5 and final remarks are made in Section 6.

II. The Nature of 2008 U.S. Financial Crisis: Symptoms, Causes, and Responses

The most vivid symptom of U.S. financial crisis was credit crisis where banks refused to lend to other banks, panicking hedge funds pulled out cash from investment banks, money market funds 'broke the buck' and CDSs (credit default swap), which is a financial insurance policy against potential bankruptcy, were traded at prices around 30 times what they would normally command. Pension funds and college endowments withdrew their money and many escaped from stocks, bonds, and money market funds to Treasury Bond.

The root cause of U.S. financial crisis was the burst of housing bubble followed by lots of foreclosures. Obligators of derivative products derived from mortgage loans were enforced to experience liquidity shortage together with capital depletion, and that was amplified by fair value accounting practice. They were forced to sell assets to obtain liquidity and to fill the depleted asset value, and this led further fall of asset prices. Vicious circle of asset sale → asset price fall → further asset sale mobilized some fire-sales and recession train. Fears induced demand for cash and flight to such safety asset as Treasury Bond accelerated the recession train.

Even with the introduction of subprime mortgage loans, unsound credit card loans and car loans all counted as original product, the 2008 U.S. financial crisis could have been avoided if there were not too much securitization with such derivative products as MBS(mortgage backed security), ABS(asset backed security), CDO(collateralized debt obligation) and SIV(structured investment vehicle), supported morally hazardous actions of rating companies[1] and *de facto* insurance scheme represented by CDS. CDOs were supposed to be high quality product containing super senior slice free of risk. With the fat fee, however, their quality had deteriorated, especially when they were combined with CDS. The development process of CDOs and CDSs hinted how a product initially devised to insulate against risks became misused towards concentrated danger. Through the busy process of trading these securitized products, especially highly complex computer-generated esoteric derivatives with least regulation by humans, the final bearer of debts were blurred and the counterparties of the financial transactions were vaporized with less than due concern on counterparty risk. Against the criticism on it as the weapon of financial mass destruction,

[1] It is surprising that some subprime mortgage-backed securities and CDOs with triple-A rating ommanded higher return relative to other triple-A papers probably in the ignorance of basic relationship between risk and return. M. Knight, "Weaknesses revealed in the market turmoil: where do we go from here?" BIS speeches, April 8, 2008.

technology, and financial engineering happened to run ahead of men in both dealing them and monitoring them. This feature was more prominent with respect to over-the-counter products than exchange traded products.

Asymmetric moral hazard behavior of derivative traders in pursuing more trade in the face of big bonus when the trade turned out successful vis-à-vis no serious penalty when trade turned out sour encouraged more than due risk taking, drove too much trade of off-balance sheet items. Proliferation of financial engineering confused risk management and led one to believe the risk redistribution *via* new financial instruments to be a means of risk elimination. The belief brought some discounting of risk and embedded a bias to more production and trade of derivatives together with another bias to pro-cyclicality of financing. In addition, it must be pointed out, the active securitization enabling many investment banks and various funds to make considerable money had not been sustainable without the ample liquidities in the financial market made available by the lax monetary policy regime which utilized interest rates more than monetary aggregate variables as its main tool. As criticized with the coined word of Greenspan put, too much liquidity had been made available to accommodate the increasing transactions of new financial products. Moreover, the lax environment was accompanied by insufficient regulatory efforts inter-mixed with the lack of appropriate regulatory implementation for new kinds of financial transactions. A natural result was the high leverage in financial firms associated with ample bubble-yielding behavior without due concern on hidden risk. The process propelled itself until liquidity dried up and funding became difficult.

For many derivatives even the total volume of their transaction was unknown and for some derivatives there were also no responsible monitoring eyes.[2] This feature gains its significance when there were hundreds of private equity funds and hedge funds alongside with investment banks, off-balance sheet vehicles in a guise of shadow banking taking maximum advantage of high leverage ratios associated with them.

[2] It is surprising to notice a circular moral hazard that even CDS depended on how Moody's and S&P labeled A.I.G.'s credit risk and rating companies earned their income from the rated, whereas much of the panic associated with CDS stemmed from A.I.G.'s CDS. New York Times, "Rated F for Failure." March 16, 2009.

Current crisis had brought many new notable features in the scene dealing with the development of crisis. Firstly, the combined team of U.S. Treasury department and Federal Reserve appeared, and took the driver's seat at early stage of crisis, bypassing usual prior step of mobilizing the inter-bank-market based on the cooperation of financial institutions. Secondly, the cause for central bank involvement, especially with respect to investment bank, was unusual, being explained with the expression 'too-interconnected-to-fail' rather than the traditional one of 'too-big-to-fail' applied to commercial bank. Indeed, up to the date of Treasury's rescue of Lehman Brothers there was no justification for employing the lender-of-the-last-resort save 'too-big-to-fail' cases, in contrast. Federal Reserve moved a step forward when it bought commercial paper at the money market, as it implied a lending by the central bank to private companies.[3] Thirdly, there was no consistency in handling various kinds of institutions engaged in providing liquidity supply and public money. There was no good explanation on why Merrill Lynch was put to bankruptcy when Goldman Sachs and Morgan Stanley were salvaged to become bank holding company. The decision not to help AIG and then the overnight reversal of it was another example of ad hoc behavior, probably owing to the logic of either too-big-to-fail or too-interconnected-to-fail adopted conveniently under the fear of many unknown counterparty risks.

As banks hoarded even the money from public sources in the crisis the financial crisis worsened the real sector of economy inviting another vicious circle of vanishing paychecks, falling home prices and diminishing spending. In this dimension stabilization of the financial sector was merely a critical first step, but no more. In order to disconnect the negative spiral of default and falling prices the uncertainties surrounding foreclosure have to be eliminated as an essential step to finalize the crisis. Moreover, even the return to normal financial market functioning may not prevent a full-fledged recession of job cuts, it is contemplated, unless there were enough government stimulus spending and tax cuts to both households and businesses, in addition to the stabilization of financial sector.

[3] It may not be illegal since Federal Reserve Act article 13(3) gave the Board of Governors the power to authorize Federal Reserve banks to make loans to any individual, partnership, or corporation provided that the borrower is unable to obtain credit from a banking institution. S. Cecchetti, "Crisis and Response: The Federal Reserve and the Financial Crisis of 2007-2008." NBER working paper 14134, 2008.

U.S. crisis propagated to other economies on the globe in rendering tremendous fall in stock market indices and big alterations in exchange rates. It became the global crisis from U.S. crisis, as the globalization looked to have interlocked fragilities all over globe. The impact appeared bigger in Europe (as Europe had dealt with more derivative products than other regions save U.S.) at first as the European Central Bank was unable to monitor comprehensively and to exercise concentrated action in front of national central banks of individual countries against the contagion of financial turmoil. In the end it propagated to all economies and the global financial crisis thereafter looked to inhibit functioning of all credit markets of the global village.

III. U.S. Responses Compared with the Responses of the 1998 Asian Financial Crisis

A. Safety Net in Normal Domestic Setting was Broken in Both Crises

In order to evaluate the above U.S. responses in comparison with the corresponding ones of the 1998 Asian crisis, various rescue instruments in the orthodox safety nets in domestic setting would better be recalled as yardstick.

In domestic finance there is 3-stair ladder of safety net. At the bottom stair of the ladder, individual firms are encouraged to operate prudently with due risk prevention measures. They are urged to operate internal check and balance system and external audit apparatus. If the firms concerned were financial firms with higher leverage than usual manufacturing firms they are additionally subject to the monitoring and regulation by respective supervisory authorities.

In the middle stair of individual efforts exists the voluntary cooperative mechanism among participants of the market. Guarding against the possibility of liquidity shortages any of them can experience, the participants used to formulate a pool and let those in need of liquidity among them to use the pooled resources. Inter-bank market offers the best example of the middle stair.

In the top stair exists the lender of the last resort (LLR). When the suspicions of bank clients are very significant and therefore even the pooling mechanism of inter-bank market is judged to be insufficient to avoid the possibility of bank run, the LLR is activated. Unlimited resources based on printing power of the central bank are mobilized for the sake of the individual banks under suspicion of liquidity shortage, and thereupon the bank runs are avoided. Considering the fact that the liquidity outside the banking system can not but be returned back to the banking system sooner or later, it can be noted, the functioning of the LLR turns out very secure and effective.

Evaluated with the yardstick of domestic finance noted above, it can be said, the measures in the bottom stair were not functioning in both crises and those in the middle stair were useless, as to be shown. In contrast, the LLR was employed excessively in U.S. crisis, whereas it was insufficient in Asian crisis.

Both U.S. crisis and Asian crisis burst as individual firms there had not operated prudently enough with due risk prevention measures. They had been negligent of the danger from maturity mismatch in particular. They did not meet the transparency requirement in carrying out the transformation of long term credit with short term debt and in dealing with dubious instruments in the process of transformation.

In the U.S. economy the financial scene started with the cash product like loans and bonds as usual, but sooner or later the firms there bundled and re-bundled those cash products to make MBSs, ABSs, CDOs, and SIVs. However, most firms utilizing these new instruments were negligent of further intensifying the degree of internal check and balance system and external audit apparatus correspondingly. The very fact that they were made subject to financial crisis testified that they needed more upgraded due diligence and more powerful safety measures beyond those employed in their usual operation. Thereupon, they ended up with crisis and emergency measures observed these days.

In Asian financial crisis, in contrast, many Asian firms dominated by the excessive pressure of ample liquidity were interested in sending money, at least some part of it, made available from outsiders' portfolio investment, to overseas economies and to other investment opportunities, without due care on the maturity mismatch arising from short-term debt and long-term investment hidden in those endeavors.[4]

Because there was no adequate prudential regulation to check the maturity mismatch in both U.S. and Asian economies, they were driven

[4] It is tricky how to understand Japan's lost decade in this context, as the enlarged difficulties were often regarded being mainly caused by delayed work-out of crisis situation.

to face crisis.

B. Response Measures Employed in the U.S. Crisis Context

In the U.S. handling of 2008 financial crisis, she overlooked individual efforts of firms at the bottom stair. It was reported that around one third of firms under SEC supervision had failed to file the required documents[5] and that SEC found that its division to oversee trading and market had not adequately reviewed many of the filings made by other firms. All institutions were in trouble from the beginning owing to their respective failure to observe due protective measures to prevent liquidity shortage by means of appropriate monitoring mechanism internally and externally.

In addition, when crisis burst out there was no possibility for an active use of inter-bank market since the possibility presupposed some healthy financial firms besides ailing firms from its beginning, whereas there were little healthy and big firms. Most financial firms suffered credit squeeze. Universal banks experienced decline in asset value and forced to write down the accounting losses from their investment banking arms. Stand alone investment banks were in worse condition without backing of their own liquidity pool from deposit taking. Insurance companies were in trouble having been actively involved in handling quasi-insurance business associated with CDS, whose valuation was the most difficult without historical data to fall back on when setting the insurance premium. Lacking a reliable clearing mechanism for it, it was obvious that the default of CDSs would bring chain reaction of derivatives it had insured, and it would surely bring in extreme liquidity freeze of many financial companies beyond imagination.

Most financial firms were infected in the credit squeeze process. Even normal insurance companies without CDS dealing were affected when they experienced bigger cash outflows than inflows from the credit squeeze. They were forced to sell good assets to make up liquidity shortage and then faced the need for write down of tainted assets together with supplementation of depreciated capital. In the end repercussions to the real side of the economy was regarded the most critical concern lest vicious spiral of mortgage loan reach others such as card loans and car loans. In that case too many firms would be

[5] The source of 1/3 is the article at the footnote 1 above.

affected with lots of tainted assets. Small and medium-sized firms would suffer more than big firms in this occasion. Even IT firms at Silicon Valley were rumored to face hardship in getting usual venture capital.

In short, most institutions which were supposed to have spare liquidity to help their companions in the U.S. usual internal inter-bank market were simultaneously in short of liquidity, negating the availability of inter-bank market. Consequently, they had actually to pass the pooling of extra liquidities in the form of inter-bank framework in the middle ladder.

U.S. asked other developed countries for liquidity help, and this can be understood to be an attempt of utilizing inter-bank framework, not U.S. internal but U.S. external. She also requested them to participate in bail-outs of their respective economies in the hope that the parallel bail-outs by all of them carried out simultaneously would mitigate uncertainties in the global financial markets.

In order to keep business to function with credits and banks to function continuously with the ability to draw on one another's resources as needed, the key measure U.S. resorted in the end was the final stair of LLR. Initially at least, U.S. Treasury and Federal Reserve tried to show their behavior as observing the traditional principle of LLR, lending only to commercial banks that were under the supervision of Federal Reserve. Indeed, Federal Reserve coined a strange mechanism of lending to a commercial bank JP Morgan Chase with the condition that the JP Morgan Chase used the money in assisting (buying) an investment bank Bear Sterns, even at the risk of condoning moral hazard behavior of the aggressive risk taker Bear Sterns. In this case it tried at least formerly abiding the logic and tradition of LLR lending only to commercial banks, even though in the backside it unveiled the logic of too-interconnected-to-fail instead of orthodox one of too-big-to-fail to rationalize the dubious action. However, the initial position could not be sustained further when Treasury Secretary asked 700 billion dollars of super-jumbo package a little later.

Restored supply of emergency liquidity in the work-out process must attain multiple objectives. In addition to unlocking credit markets and supplanting dried liquidity to keep credits flowing to businesses and consumers the workout program should involve the tasks of (1) removed bad debts at the asset side of balance sheets of financial firms, (2) preventing of deposit runs associated with the liability side of balance sheet and (3) strengthening of capital. When these tasks cannot be carried out simultaneously some priority among them has better to be set.

In handling the bad assets in the asset side including restructuring of the existing mortgages and derivatives, appropriate prices for various kinds of bad assets of ailing companies, some being worthless or impossible to value, should be discovered such that the revenue from sales could help the impaired institutions to revive with strengthened capital base. With respect to the mortgage restructuring in particular, it should be ended up to a substantial decrease of foreclosure by means of lowering interest rates, of extending payment schedule, and then to prevention of further decline in housing prices as well.

It must be noticed that the implementation of work-out along the above scheme would be very delicate as there are conflicts of interest between the firms with bad assets and the carrier of work-out. If the work-out forces the bank to book big losses it would be self-defeating as it would let banks unable to resume lending with strengthened capital. Otherwise, if it buys the assets at the value at which banks are keeping them on their balance sheets, tax payers will almost certainly be over-paying. Even if reverse auction is to be employed such that final prices are to be determined by how many banks are willing to sell bad assets, there would be many bad assets without relevant market negating the application of reverse auction scheme in all cases. Indeed there is still suspicion that even the reverse auction might not work for such heterogeneous objects as derivatives or their part of tranches classified by the investors' appetite for the risk.

Supplement to it the avoidance of bank run is urgent. Some guaranteeing if not nationalization may be necessary. In order to avoid bank run and money market break to accommodate the credit needs of businesses and households and to protect fragile inter-bank market, the guaranteeing of all deposits at banks would be an easy way retaining the most immediate impact. However, in this case, there would follow a hazard of too much lending. At the extreme the deposit-taking banks can be nationalized, at least temporarily.

The capital being the final base of operation of financial firms must be enlarged and strengthened, but it should not stay there after injection in the form of hoarding cash. Anyhow, all these are never easy objectives to attain simultaneously. Thereupon discretion of bankruptcy judge to moderate mortgage conditions may be desirable as a supplement to it. In the meantime when the public money was to be lent the interest rate was supposed to be punitive as required by the logic of LLR and exemplified in the case of AIG.

The above consideration on the balance sheet items of ailing financial firms is directly related with the specific issue on how the public money was to be best used. Before the fixing of the sequence of work-out one easy way which might have immediate effect to take is to inject the public money to the troubled institutions in the Wall Street by means of buying devalued equities and let the capital-strengthened institutions appropriately eliminate or at least mitigate the bad assets in most efficient way. This choice assumes that the troubled firms know best about the bad assets with lots of inside information and they are the experts to carry out work-out task. However, this turns out nothing but to hand over authority to those who misbehaved to make the trouble at the beginning.

Another way is to use the public money to purchase mortgage loans directly wherever they are, noticing that by attacking the bad assets at the root it would much facilitate mortgage adjustment thereafter. The difficulty of this method is that the where-about of initial mortgages was hard to identify as they were bundled and re-bundled in the process of being made into MBSs and ABSs, and then CDOs and SIVs. Therefore it inevitably would take rather long time delaying required quick responses.

When the proposition that the central concern of current crisis is nothing but the crisis of trust is recalled, equity injection into the financial institutions looks most preferable.[6] It may have quick impact on restoring confidence by substituting credibility of banks with the credibility of government through de facto nationalization, at least partially, and by constraining too active role of investment bankers of Wall Street suspicious of being the originators of the crisis.

In case the equity injection was taken with respect to financial institutions, succeeding issue is how to handle the difficulties of auto industry and airline industry, recalling that these are also critical industry whose failure has to be avoided in consideration of employment and trust re-habilitation.

Another concern is how the public money is to be distributed among various financial institutions under alternative regulatory schemes.

[6] There is a question on whether the financial institutions referred here would include insurance companies. Since the liabilities of insurance companies are usually long term unlike short term deposits of bank liability the insurance companies may better be left out from the need of emergency capital injection.

Effects of regulatory arbitrage must be taken into account in view of competitive guaranteeing among countries in infusing money to guaranteed big institutions and non-guaranteed small institutions in an individual country as usual and similarly so to banks with deposit guarantee by their respective government and banks without it. Incidentally, there might be unexpected capital outflows out of less safe economies to safe economies, whereas the former would be emerging economies and the latter would be developed economies.

U.S. Treasury seems abandoned its plan to buy toxic assets of banks directly, bypassing the fundamental solution of removing rotten apples from the rotten basket for a moment. In the face of the shift of the Treasury stance to aid financial firms other non-bank institutions such as insurers, student loan companies were lined up for the liquidity injection. However, these were less likely to circulate the injected money to real economy than banks as they might have to meet their respective regulatory requirements ahead of it, or they would intend to acquire weaker rivals against the gloomy psychology which could render banking crisis into economic crisis. Moreover, if many institutions were aided with public money injection a danger of horrible inflation in later days with an inevitable massive printing of money must be expected.

With respect to regulatory failure and too much liquidity, there were reviews of past financial regime. The question had arisen why derivatives were not adequately regulated and how the shadow banking apparatus attained the high leverage ratio around 30 in distinction to the counterpart of it for commercial bank with BIS ratio of 8%.[7] It was noticed that the effort by the Commodity Futures Trading Commission at 2003 to regulate options and futures had been opposed by Greenspan and then secretary of Treasury Rubin on the principle that too many rules would damage Wall Street and that even merely discussing new rules would threaten the derivative markets.[8] The good will of Wall

[7] It was surprising to notice that at the end of February 2008 Bear Sterns had roughly $12 billion in capital to support just under $400 billion in assets. S. Cecchetti, "Crisis and Response: The Federal Reserve and The Financial Crisis of 2007-2008." NBER working paper 14134, 2008.

[8] In later date, however, he conceded error by admitting that Greenspan had put too much faith in the self-correcting power of free markets by confessing an error in assuming that markets would properly regulate themselves and failed to anticipate the self-destructive power of wanton mortgage lending without an idea a financial disaster was making. New York Times, "Greenspan Concedes Error on Regulation." 10/24/2008.

Street to self-regulate was very much trusted to fend off restrictions by the authorities at the time, and then had met the criticism later for not disciplining institutions that lent indiscriminately. In spite of the Greenspan's belief that not the derivative contracts but the greed and dishonest of people who made contracts was to blame, it turned out, re-regulation and system modification to restore trust and confidence was regarded essential to fill the gaps and weaknesses in the regulatory oversight. Some additional measures to discourage excessive risk taking were considered necessary, too.

C. Safety Nets in Asian Financial Crisis Context

The above developments in the U.S. are somewhat different from what went on in the 1997 Asian crisis. At the bottom stair a few means had been suggested and strongly emphasized as self-help measures of the Asian firms. First of all Asian developing countries were advised to maintain a transparent system even after the fact of financial crisis. In this way, it was reasoned, these countries would be made to secure confidence from foreign investors. With the same kind of reasoning, these economies were recommended to have adequate risk management system to rule out excessive risk taking associated with moral hazard behavior. More concretely, they were urged not to accumulate excessive short-term foreign debts. One step further, they were advised to set up a legal and bankruptcy system that was very similar to investors' corresponding ones. To put it critically, Asian countries wanting to utilize external capital were asked to develop institutions very friendly to foreign investors. Unlike U.S. firms under U.S. handling of 2008 crisis, Asian financial firms were urged to behave prudently in relation with the bottom stair even after the fact that they were in the crisis with the past inadequate behavior.

Accumulation of lots of foreign exchange reserves was considered to be a good way to increase foreigners' confidence as an economy with ample reserves was usually regarded essential to be able to repay more easily than otherwise the short-term debts, which were so often the seed of difficulties in many crisis occasions. Another policy recommended for Asian debtor country to follow was to discriminate among the modes of capital movements. She might further prefer direct investments by the foreigners themselves to the portfolio investments, because in the case of foreign direct investment foreigners assume a larger responsibility when things turned out bad. She might prefer equity financing to debt financing among portfolio financing, and because the former involved larger burden sharing by foreigners.

Similarly an active invitation for the presence of foreign banks was advised, as foreign banks were considered to have their own reputation independent of the difficulties of the economy they were doing business in. Even with the loss of confidence of local institutions during the financial crisis, foreign banks were regarded remain free from the contamination and thus be able to supply financial services normally. Accordingly, in order to secure continuous financial services, Asian economies were advised to invite foreign banks[9] and this was expected to enlarge external interbank market.

It was regarded at least up to the de facto end of Asian crisis that, in this safety-feature-insufficient global financial environment, the most an individual economy could pursue were: to clean its house with respect to the issues of transparency, corporate governance, prudential regulatory system, and sound management of macroeconomic policies. If there occurred a crisis even with the effort of house cleaning, it should further strengthen the intensity of stabilization policies thus far taken and then ask external financial assistance to IMF and others. Being non-key-currency economy non of them were able to mobilize new liquidity individually against the credit freeze from the crisis. Instead, it was advised that the extent of strengthening and magnitude of financial package would better be larger erring on the excessive side than insufficient side. Worsening of crisis dynamics due to less than sufficient adjustment package and external financial resources was taken much more seriously than the foregone cost involved in excessive erring (or overshooting). In short, in striking distinction to U.S. troubled firms, Asian troubled firms were requested on so many fronts even after the crisis up-rise.

To our surprise, however, they were medicine after the fact instead of being remedial means, as 1998 crisis had burst when these advices were rendered. In this sense the bottom ladder was of no effect in the 1998 Asian crisis. Moreover, they were very different from what U.S. employed in 2008.

It must be emphasized that at the backside of the above negativistic

[9] This point was very strongly stressed by Allen H. Meltzer, "Asian Problems and the IMF" in the Cato Journal Vol. 17, No. 3. It is ironic though, Asian economies suffered the sudden pull initiated by foreign financial firms in 2008 crisis.

response in the Asian crisis there was some powerful potential contribution of source countries and creditors in alleviating and preventing financial crisis, if debtors were unable to work themselves out. However, surprisingly enough again, at the time of Asian crisis the obligations of creditor countries had not received due attention. U.S. occupied creditor position even if U.S. was the biggest net debtor of the world at that time, and she with IMF demanded much adjustment of macroeconomic policy undertakings of Asian debtor countries as necessary conditions of renovated international financial architecture. Behaving as a creditor country she was not interested in taking what would better be adopted as the creditor country, let alone helping debtors to take their respective self-help measures just like she took herself at the 2008 crisis. Even the accident of LTCM in 1998 was ignored irrelevant to be a factor for renovating the international financial architecture.

At the middle stair of safety net there was an attempt in Asia to establish a regional fund as for an inter-bank market. The thesis for Asian Monetary Fund was examined in relation with the 1997 Asian financial crisis to establish a cooperative pooling mechanism for Asian region, a subset of the world. However, it could not be materialized as U.S. opposed to the idea with the reasoning that AMF might weaken IMF. Thereafter discussions around AMF submerged as for a device for resolving Asian financial difficulties.

Without an ability to mobilize LLR autonomously, not being a key currency country, Asian emerging economies had to seek the LLR from outside. However, in the world economy there is no LLR. G7 countries were negativistic on the formulation of new global institutions like The World Central Bank. Not only being unable to mobilize LLR themselves autonomously but also Asian countries could not have outside LLR at their disposal at the top ladder. Accordingly, to Asian economies the best hope was strengthening of *de facto* LLR associated with IMF, even if it was too often mentioned that the current IMF was too small in resource endowment to assume the normal role of de facto international LLR. It was sensed that G7 was not prepared to put up the kind of resources needed to preclude any serious problem in international finance and to make the IMF as for the World Central Bank to handle a broad-based attack on developing country debt problem and international bank runs associated with it.

De facto LLR help came with various conditions under the auspice of IMF during Asian financial crisis with alternative strengths to alternative troubled Asian economies. To Asian economies the very liquidity in short of was foreign exchanges and at the crisis time current account transactions were insufficient to generate necessary exchange for meeting usual expenditures in foreign exchanges whereas capital inflows were significantly reduced. So called sudden stop was there. But LLR help was not sufficient.

In this hard situation the deficit in the balance of payments was diagnosed to come from over-valued local currency fundamentally, while capitals escaped due to low interest rate. Thereupon, activating LLR by mobilizing internal monetary resources was irrelevant, and enhancement of interest rates to curb capital outflows and to induce capital inflows was noted major remedy. Adoption of free exchange rate system in replacement of fixed exchange rates which tended to preserve overvalued local currency was another important measure.

It is worthwhile to notice that this understanding around G7 and IMF was in good contrast with the position of the UNCTAD. UNCTAD recognized the self-evident benefits of the method of establishing codes and standards to help strengthen domestic financial systems of debtor countries, but noted that of itself it entailed neither a fundamental change in policies and practices of source countries nor improvements in the transparency and regulation of currently unregulated cross-border financial operations. It brought under spotlight the importance of standard-abiding by source countries of international finance in parallel to that of recipient countries.[10] Moreover, the UNCTAD report touched upon the regional arrangements as a means to provide collective defense mechanisms against systemic failures and instability, observing that regional currencies were increasingly seen as viable alternatives to dollarization. It weakly responded to the need of having the middle ladder in the global financial architecture.

IV. The Effects of the Global Crisis to the Korean Economy

All the above changes in the 2008 U.S. financial sector have negative

[10] It further noted that there was a danger that the incentives and sanctions linked to standard-setting would become features of IMF surveillance and conditionality, compliance with which would place a further heavy burden on the administrative capacities of many countries despite the emphasis of their voluntary adoption. UNCTAD, Trade and Development Report, 2001.

effect to East Asian economies in general, and Korean economy in particular. Beleaguered foreign banks pulled out their credit lines constituting a sudden pull (in distinction to sudden stop in 1998), exports by East Asian economies to developed economies suffered. In short, just like other non-U.S., non-European and non-East Asian economies like Brazil, Algentina, Turkey, Russia, India, and Indonesia Korean economy cannot avoid the spill-over of U.S. difficulties originated from the financial turmoil.

Korea like other non-U.S. economies happened to have various effects. They witnessed a fall in their asset prices made of instruments issued by contaminated U.S. financial institutions (investment banks, hedge funds, AIG, Fannie Mae, Freddie Mac *etc.*) in the form of equities, bonds, and other derivatives. They were placed under an uncertainty about how their investments would recover the original value. They experienced the fluctuations in their interest rates, stock indices and exchange rates, more or less in parallel with the fluctuations in related U.S. price signals. Bank credits were curtailed and credit evaluation became more conservative with decline of trust and confidence to lead to higher interest rates at least to a number of individual debtors. Renewal in money market had been made difficult, freezing the way of obtaining liquidity by issuing commercial paper. The impact from the financial side to the real side would be much more amplified if financial crisis were to be expanded to include others such as card loans and car loans.

Many companies suffered, and small and medium companies suffered more than large companies that had more cushions as usual. Housing prices fell alongside with loan depreciation. Thereupon, jobs were decreased enforcing more modest ways of living. Government spending not related with financial restructuring would surely be curtailed giving further shadow to real economy unless government increases its spending against upcoming recession. Some pension plans that invested heavily in financial assets were severely depreciated, aggravating market mood. Thereupon, the competitiveness of Korea were impaired and its sustainability weakened.

However, Korean economy unlike others retained a few conditions to do relatively well in enduring crisis. The reason for this judgment would be: she had higher savings rates, she used to have current account surpluses, she happened to have somewhat strengthened regulatory system after her suffering of 1998 Asian financial crisis, and she would be better positioned to take advantage of the potential of resource price fall as being a resource-poor economy. With these conditions and constraints she had to survive the spilt-over effects of global financial crisis. She may have to participate at a cooperative arrangement of lowering interest rates all together to boost aggregate demand and of placing some public money to impaired spots with bad assets. Against this background there appear a few agenda Korea would better concentrate on in adjustment to changed situation with long run perspective.

V. Longer-run Consideration for the Korean Economy

In view of the differences in the undertakings observed between the 2008 U.S. crisis and the 1998 Asian crisis a few things need to be rethought (re-considered) for the Korean economy being a non-key-currency country. This becomes more urgent when G20 which may replace G7 at least partly with new members from emerging economies may fail to establish a new international financial architecture and to materialize a coordinated fiscal stimulus to counter global downturn. Important among them are the preparation for a possibility of newly emerging key currencies beside dollar, the choice of exchange rate system, and further intensification of cooperation between creditors and debtors.

A. Regional Cooperation for Asian Currency Unit

The most critical concern for regional cooperation at the moment would be an establishment of regional currency, as Asia may need their own currency that can par with U.S. dollar and European Euro. These days Yen and Yuan are recognized to be major currency even if both are not actively traded key currency like dollar or Euro.

The prime reason for a country to have one's own currency is to secure seigniorage gain, as is well known. By issuing a currency whose production cost is far less than its purchasing power the issuing authority secures considerable resources denoted as seigniorage.

During current de facto dollar standard U.S. has enjoyed tremendous segniorage gain from the trade, not only from her own economy internally but also from other countries externally. In the backside of the fact that most economies use dollar as their transaction vehicle in lots of trade and in their international financial transactions, U.S. thus far has obtained huge gains. With the appearance of Euro recently, of course, the monopoly position of U.S. dollar as the exclusive international vehicle currency has been a little challenged. The monopoly position has been changed into duopoly position. But U.S. remains the leader of the duopoly.

On the opposite side of U.S. monopoly of seniorage gain Asian economies had to pay the foregone cost of seigniorage loss. With the change of U.S. monopoly into the duopoly by U.S. and Europe, Asian economies are still destined to have to pay the foregone cost continuously, even if the cost in the duopoly situation could have been smaller owing to the little competition associated with the two duopolist than the previous dollar monopolist.

Asian currency could be created in parallel to dollar and Euro breaking the status quo. If created it could save the seignorage loss Asian economies have thus far burdened. It would also alleviate the burden of other non-Asian and non-U.S. and non-European countries, as the competition by three would imply intense competition than duopoly competition and thereupon lower seigniorage by the three key currency issuers. Furthermore, it could mitigate the difficulties in the resolution process of so called global imbalance.

In addition to the seigniorage gain, Asian economies and others could further be benefited owing to smaller international reserves and less fluctuating exchange rates, which in turn are to be made feasible due to three competing major currencies. The proposal for Asian Currency Unit (ACU) is worth further reexamination in this front.[11]

In the past years Japan sent balance-of-payments surpluses to the U.S. mainly by means of purchasing U.S. Treasury Bonds. However, by investing that way Japan has incurred lots of capital losses in the back side of secular exchange rate alteration between dollar and yen into the direction of dollar depreciation and yen appreciation due to U.S. current account deficits and Japanese current account surpluses. In order to avoid the capital losses Japan has continuously demanded U.S. to issue treasury bonds denominated in yen. The Japanese desire to avoid capital losses with the adoption of yen-denominated bond is best noticed by the abortive bonds associated with the names of U.S. presidents; Carter bond, Reagan bond, Bush bond, and Clinton bond.[12] China having the largest foreign exchange reserves in the

[11] In early 80's there was the discussion on the third world money. Its idea was to save the foregone senioage by using U.S. dollar, and therefore of the same spirit as the Asian money.

world is not different from Japan being in the disadvantaged position in this regard.

Japan and China can divert the capital they thus far invested in the U.S. sacrificing capital losses, and utilize it in the Asia for the creation of Asian currency. For this purpose, of course, they do not have to reorient all capital she sent to U.S., as Asian economies are relatively small and need relatively smaller emergency liquidity. They can start utilizing a part of the capital directed to U.S. to ignite a first step for regional monetary cooperation and ameliorate the subtle situation of global imbalance.

At this juncture a few features can be further recalled. Firstly, it must be remembered again that current day Japan is well positioned to assume the major lender' role for Asia, which is prerequisite for the economy providing key currency in the region. Japan has been running current account surplus continuously, especially vis-à-vis Asian economies for last several decades and it looks it will continuously be so in the near future. The scheme of currency swap among 14 Asian countries can be considered a positive step into making of Asian currency, in addition to the 200 million dollars of swap among ASEAN 6. Further swap agreement between Korea, China and Japan could be counted in this context. Together with the trials utilizing currencies of Asian economies in the swap deals the attempt to formulate and stabilize the exchange rates could help materialize Asian currency in the coming future, as exemplified among Japan, China and Korea. In 2009 Chingmai initiative was extended to establish a common fund amounting 12 billion dollars of which 80% was to be shared by Korea, Japan and China with the ratio of 2:4:4, strengthening the momentum of the initiative. This point turns out more distinct as U.S. extended swap with G7 a few others in dealing with the 2008 financial crisis.

In a near future Yen-Won swap can be arranged with a background scenario that Korea gets Yen and exchange it into dollar. This arrangement could be a win-win policy as Japan achieves capital export denominated in Yen through Korea whereas Korea can procure dollar liquidity, even if Korea does not use the Yen swapped as itself directly in the market.

[12] There is a concern that the AMF could undermine the leadership role of the IMF and foster a split between Asia and North America. F. Bergstern suggested Asia Pacific Monetary Fund to mitigate the concern in replacement of AMF.

Secondly, China's participation at the so-called 'Asean+3' process associated with the Chiang Mai Initiative can further be expanded. With the rise of Chinese economy China's worry or resistance on Japanese domination is quite much removed, hinting China's probable inclination to Asian currency. The most noteworthy response along this line is the Chinese plan to spend as a stimulus package U.S.$ 586 billion over next 2 years. The plan is noteworthy as it is huge next to U.S. $700 billion and it is mainly bestowed on investments in real sector in contrast to U.S. rescue measures focused on bank normalization.

In the meantime, IMF must be strengthened. Incidentally the IMF's newly devised short term liquidity facility that will disburse 3-month loans to countries with good policies and manageable debts looks a forward step in this context as it appears not attaching any of its usual conditions. Japanese lending to IMF of U.S. $100 billion would also enforce IMF activities along the line. The former IMF managing director Koehler stated that the IMF and AMF could coexist and that .... it is up to the region to decide on an AMF .... in Bangkok during his 5-nation Asian tour in June 2000.

When the need for Asian money and the huddles to it are taken into account, the materialization of Asian money cannot but be a gradual process. The starting point would be the old Miyazawa Plan, with a few problems associated with taken care of. Especially, the fact that it uses U.S. dollar as the medium of emergency loan looks not compatible with the final end of making Asian vehicle currency, and therefore it must be changed.

B. Choice of Exchange Rate System

The exchange rate system is a very important factor of financial system deserving an utmost attention for non-key currency economies. Concerning the exchange rate system, discussions around G7 at the time of the Asian crisis involved as their core the observation that the hard peg system (currency board system and dollarization) and free float had became a component of new architecture. They were simply satisfied at that time with the trend that more countries were taking either of these two corner systems away from intermediate arrangements of adjustable-peg nature.

They have simply overlooked the difficulties of the hard peg system owing to the change into non-autonomous status by relegating its monetary policy to the outside monetary authority when its currency was hard pegged. In other words, they did not sympathize with the hardship that Argentina faced with her *de facto* dollarization in the form of currency board system. They tended to ignore the agony after having given up the monetary policy discretion by abiding rigid fixing under the circumstance when the economy experienced a structural shift (like change in industrial structure of Algentina from its previous one away from U.S.) vis-à-vis dollar under the circumstance when the exchange rates among major currencies changed considerably. The shift should bring a change in exchange rate in non-dollarized economy, but a dollarized economy cannot accommodate it.

With respect to the free floating, in contrast, they were also least mindful at recognizing the pre-conditions for independent floaters, consisting of independent central bank, well-regulated financial system, efficient fiscal institution, and stable political system, all supported by diversified trade and financial linkages. They underestimated the hard hidden efforts in the successful free floaters to stabilize the exchange rate by means of monetary policy of forward-looking-inflation-targeting type and stringent fiscal policy, whereas many economies lacked the ability to do so. Without well established infrastructure a mere adoption of free flexible rate system would bring unbearable exchange rate fluctuations, which create its own difficulty of managing usual trade and business.

Free-floating strategies have their own costs of possible excessive volatility and free riding risks. If myopic and system-hurting herd behavior cannot be ruled out and thereupon the efficient allocation of resources cannot be guaranteed, resulting in high cost of exchange rate volatility, the inclination to the perfect capital mobility as a way of resolving the so-called tri-lemma (showing the inconsistency of independent monetary policy, fixed exchange rates and free movement of capital) may not be warranted. Presumably, having experienced disruptive misallocation of resources under free floating, many emerging economies might have discovered that managed exchange rate strategies in the guise of *de facto* adjustable peg could be the better one for them than the two corner solutions, especially for those without well functioning capital market and various infrastructure developed over long period of time to support the well-functioning capital market. This implies that the choice of either of corner solutions by emerging economies is not necessarily inevitable, implicitly explaining why so many emerging economies have *de facto* adjustable peg after recent financial crises even after having heard of the advice that the two choices left to them were either free flexible exchange rates or currency board.

The hardship in choosing appropriate exchange regime of non-U.S. economies is not observed at all in the U.S. in the 2008 financial crisis. Moreover, U.S. has not bothered about external exchange reserves even if she has a little worried about the decline in the real value of dollar at the early days, unlike the Asian countries in 1998 Asian crisis. She did not mind to raise interest rates to encourage capital flow into U.S. when she lowered interest rate together with additional liquidity supply to supplement the weakened credit circulation. As a weak gesture she merely invited external sovereign fund in this context. There was no role of IMF or any others requesting U.S. on the conditions on macroeconomic management, neither.

The prime reason for these differences between Asian economies and U.S. originated from the fact that U.S. dollar is the key international currency and thereupon by virtue of original fortune she is liberated from the difficulties of foreign exchange insufficiency.[13] She has the luxury of benefitting from the seigniorage by providing dollar as the vehicle currency of international transactions beyond her own economic territory especially in financial transactions and oil and as the medium of external reserves. In U.S. there is no exchange rate problem of other countries like Asian economies. She simply let others to keep her currency and her-currency-denominated debts as for external reserves with little cost to herself.

It is desirable to lesson the degree of this asymmetry between U.S. and non-U.S. One way for non-U.S. would be to leave from the two corner solutions and adopt adjustable peg where there is some room for exercising discretion when emergency situations appear.

The right adjustment may differ depending on the nature of exchange market pressure and availability of international reserves, whereas the exchange market pressure is usually understood as an excess demand for foreign exchange at a certain time. When the main part of exchange market pressure is judged to be transitory nature the right response would be less variation of exchange rate and more change in reserves,

[13] The original fortune is the work to represent the opposite position of 'original sin' the word once used by Barry Eichengreen to describe the unfortunate position of non-key-currency countries. B. Eichengreen and A. Moody, "Exchange Rates and Financial Fragility." NBER working paper 7418, 1999.

and vice versa for the pressure of permanent nature. This concern is very important with respect to capital movements, as some of them can be of the transitory nature.

Appropriate mix between exchange rate variability and reserve alteration to prevent too much rate changes has to be seriously considered. Unlike previous days in the past, it should be noticed, the capital outflows, from emerging economies during the peak of 2008 U.S. financial crisis carried by hedge funds, of past carry trades and others from developed economies, were of one time nature dominated by the sudden pulls in the form of unwinding of past portfolio investments. These pulls cannot continue for some time and whenever they stop the pulls the exchange rates will return to the previous levels mainly determined by current account transactions. Therefore, it might be wise to let exchange rates overshoot to a degree for the short period of time when sudden pulls are active in contrast to any trial to keep the rates within narrow range by using reserves, as far as exporters and others of current account transactions can be persuaded to be patient for the short variations associated with sudden pulls. The past practice of sticking to the adjustable rate system with a too narrow range may not be warranted. In this case the flexible rate system turned out to be a restraint to virulent capital flows. Letting the rates overshoot temporarily would also discourage the calculation of the pulls because they have to experience the disadvantaged price of exchange at the time of pull at the overshoot rates.

C. Cooperation between Creditors and Debtors

Today's financial crisis is associated with the huge capital flows among countries, whereas the capital flows have made some economy debtor and the other creditor. In the process of search for better ways of managing international capital movement and thereupon control their effects on financial market in the meantime, there appeared some discussions on how the creditor from whom the capital originated and the debtor to whom capital destined should do individually and then cooperatively. This aspect was quite important to emerging Asian economies that experienced 1998 financial crisis as debtor. But, its significance has increased with the newly revealed feature of global imbalance where U.S. portfolio management behavior is markedly different from those of others in the sense that U.S. has been a net capital importer and debtor, while she has actively exported some of them in other countries in the form of higher risk-higher return investment, assuming creditor position in this regard even if she is a net debtor.

Debtors were usually requested to behave prudently at an individual level just as Asian countries were during Asian financial crisis. As discussed above securing of transparent and foreigner-friendly system by debtors was recommended, in spite of the fact that it was not easy for a society with alternative traditions to the western ones to attain it. Besides, it was noticed that even totally transparent societies sometimes experienced bank runs and country runs, whereas not much transparent economy showed good performances.[14] In the extreme, it was even warned that too much transparency can even exacerbate the instability in the crisis situation helping speculators coordinate on the timing of a run. For non-U.S. economies, at the opposite side of U.S., huge external reserves are nice collateral to foreign creditors. But, more than adequate reserves implies hidden costs. It is not reasonable to ignore the opportunity costs foregone in the foreign reserves judged too much. Adequate level of reserves together with their currency composition must be searched more seriously than before in the era after 2008 global financial crisis.

Recall the previous discussions that explained the global imbalance as a choice Asian countries gladly took in order to expand export in the guise of neo-mercantilism,[15] or the explanation which cited the lack of financial development at home made Asians to invest in U.S. in search of better size, liquidity, transparency and efficiency by buying securities to overcome the dearth of good options at home.[16] The discussions argued that U.S. happened to be a debtor passively as Asian economies were eager to secure collateral for U.S. FDI invitation or to equip them with nice U.S. issued financial assets.

However, it seems that the role of the U.S. as an aggressive creditor instead of a role as a debtor looks to have met a turning point with

[14] In an address to the Chicago council on Foreign Relations, Joseph Stiglitz said that Nordic countries all being very transparent experienced financial crisis in early 1990s, while Germany never being very transparent had experienced no crisis. Recent bank runs and Fund runs in UK and US also confirm this point.

[15] M. Dooley, P. Garber, and D. Folkerts-Landau, "The Two Crises of International Economics." NBER working paper 13197, 2007; J. Aizenman, "Large Holding of International Reserves and the Emerging Global Economic Architecture." NBER working paper 13277, 2007.

[16] K. Forbes, "Why Do Foreigners Invest in the United States?" NBER working paper, 13908, 2008.

the current crisis. She took many new measures to handle this crisis including Federal Reserve assistance to investment banks and insurance companies with the rationalization of too-interconnected-to-fail (in distinction to the too-big-to-fail) and other inputs in the form of purchasing preferred stocks or common stocks of financial companies and some guarantees, accompanied by the talk on the use of bad bank apparatus. In essence, however, these measures were nothing but the emergency measure taken by the creditor U.S. to the debtor U.S. They were not the measures prepared beforehand in anticipation of crisis, but turned out de facto cooperative measure. Even if they may not be denoted as contingency measure of itself they were contingency measure invented in hurry by the creditor U.S. to the debtor U.S. Hence, this occasion must be made to be a momentum to introduce other contingency measures, not of self-help type only for U.S. but of natural cooperative type between potential creditors and potential debtors.

In this sense, the asymmetric understanding of U.S. as a special debtor thus far sustained has to be changed with the current crisis. From now on with the fact that U.S. became more significant debtor not only to outsiders but also herself, she would better be to reposition herself savings more. The year-old argument that U.S. should save more and others export less with expanded domestic spending has to be recalled and reemphasized. In view of the possibility of global inflation owing to the massive liquidity released in the process of fighting against upcoming recession by many countries together with dollar devaluation, readjustments of various prices in devalued dollar have to be worked out, as the U.S. adjustments to resolve global imbalance are expected to be carried out in devalued dollar.

At this turning point for seeing U.S. as both debtor and creditor it looks necessary to distinguish the monotonic discussion on the desirable role of debtor from those about the cooperative scheme between debtor and creditor. At an emergency situation it may be inevitable for individual economy to adopt unilateral and immediate solution, in view of the fact that attempts for cooperation usually requires quite much time. Otherwise, search for cooperative solution is much desirable. Besides, there are a few measures considered thus far even if they are of academic nature beyond immediate implementation.

The notable ideas suggested for cooperation along this line were (1) Collateralized credit facility sketched in Feldstein (1999) and (2) lending with covenant hinted in Wyplosz (1998).[17]

The former one is to create a facility explicitly with the provision of collateral for the protection of the providers of credit. The facility enables continuation of credit supply even in abnormal situations through permitting drawing of credit on short notice by the borrower based on the condition specified in the contract of the facility. The most common collateral is trade receivable. The net effect of the facility is allowing of an option to borrow by the creditor to the debtor. Accordingly, it requires an explicit consent of the creditor before the date the option is to be exercised, and thus can be characterized as cooperation requiring.

The second one is concerned with relieving debtors from weight of debt payment at least temporarily in a crisis situation. It intends to incorporate covenant that allows stopping the clock of debt payment while maintaining market access. For this purpose it tries to change the current practice of lending contract, by incorporating clauses that could even take care of any possible outcome from speculative crises. Embedding the covenant into the contract would never be easy; therefore, it involves a cooperation that can be secured in complicated ways.

Thus far the U.S. has been an abnormal debtor with no creditor demanding such things associated with conditionality to her in stark distinction to the Asian debtors at 1998 Asian crisis times. In addition, there are reasons for this asymmetric treatment. One reason might be that U.S. was too big and too strong a country such that there could not be any stronger creditor giving sufficient new credit to her (or withdrawing past credits from her) and at the same time demanding many things as for the condition of credit arrangement. Another reason might be that U.S. might not be a desperate debtor since she has other means than seeking credits out of herself. Indeed, she is the key currency country having the power to print dollar whereas dollar turns into the most sought medium when crisis is imminent and critical.

The cooperative ways between creditor and debtor seen above may better be reinvestigated. Much more contingency facilities could be utilized. U.S. hasty response to credit crunch and delayed but finally taken coordination among G7 countries in the area of fiscal stimulus have to be re-interpreted with the recognition that U.S. position disclosed in its essence involved nothing but a feature of critical debtor.

[17] The self-help measures may be supplementary to the gradual financial reform, that is very recommendable when upfront fixed reform cost is big and the volume of financial transaction after reform cannot be great (Lee 2006).

The cooperation measures can better be examined with year-old issue of global imbalance associated with a fear of hard landing as will be touched later.

As for a first step forward along the direction, in order to install a little symmetry from the previous asymmetric posture between center U.S. and peripheral emerging economies, the emergency swap agreement among G7 has to be extended to significant emerging economies, beyond the level U.S. took only with a few emerging economies such as Brazil, Mexico, Singapore, and Korea. In case the swap is opposed, on account of the fact that the currencies of emerging economies are not convertible, another kind of swap between U.S. dollar and U.S. Treasury Bonds has to be guaranteed in view of the fact that some emerging economies have some U.S. Bonds in their external reserves. Thereafter, when the emerging economies are noticed to be victim of U.S. originated crisis, some standby facility to use against temporary dollar shortage may better be provided to them. Other means must be devised to make other debtors a bit more similar to the debtor U.S. by the creditor U.S.

VI. Final Remarks

It was discovered that shadow banking sector consisting of investment banks, hedge funds, insurance companies and others has played a critical role like orthodox banking sector in the 2008 crisis, whereas it has not been regulated as banking sector. The companies in the shadow banking abused the loose regulatory structure that was unable to catch up with the developments in the sector. Consequently they happened to have respective high leverage ratios, and that in turn have resulted in current financial crisis. Anyhow, the credit crunch associated with the difficulties of bank market had spread to insurance market, car market, and hedge fund market resulting in a sort of hard landing, not only lots of turmoil in all sectors but also in the form of potential dollar depreciation. The outcome of high leverage is the same as that observed in the Asian financial crisis, except it was materialized by the shadow banking sector this time. In addition, U.S. financial authorities employed exceptional measures such as the FRB's direct purchasing of asset-backed securities (meaning the FRB direct lending to non-bank), and the U.S. Treasury department purchasing of common equities.

As for a remedial measure, the loose capital provisioning with respect to companies in the shadow banking sector should be corrected comparable to that of the orthodox banking. Furthermore, The notion of dynamic provisioning can be introduced to take care of the pro-cyclicality of financial activities noticed missing even in the BIS requirement. The so-called dynamic provisioning which enhances capital provision at the time of upswing of cycle and the other way around at the time of downswing could be institutionalized in all economies. Regulatory system must be rearranged to avoid the loose regulation, especially with respect to derivative products. Use of clearing houses for the trade of derivatives and timely reporting by the shadow banking institutions on their holdings to the relevant regulators will be helpful to better comprehend a new big architecture of financial wonder world. In addition, in view of un-predictable and serious events as observed in 2008 financial crisis, some discretionary judgment exercised by responsible human being may formally have to be secured against abnormal and extreme situation.

At the beginning of the depression of the developed economies under the crisis, at least for a brief period, the emerging economies were once considered a rescue team in supplementing weakened global demand. However, the contamination of U.S. crisis to others rendered the need of supplementation unfilled. Conversely, real side of them was ameliorated through the contractions of export and import between developed economies and developing economies. Emerging economies' hardship was further increased in the withdrawal of loans from advanced countries' banks with a feature of sudden pull, together with the similar pulls by hedge funds of developed economies, and in the unwinding of carry trade actively pursued owing to the relatively low interest rates in Japan and U.S. during last 3 years or so.

It can be said today's financial crisis was magnified to a global scale with the increased capital flows among countries in a sense. The capital flows turned into a mechanism for propagation of crisis, making some economies debtors and the others creditors at the same time with the risk associated with both debtor and creditor generating unprecedented counterparty risk. Then, stock market indices and exchange rates of emerging economies all showed red sign in the midst of search for safe haven of dollar and yen by the capital previously invested in the emerging economies. The symptom of sudden pull was at first regarded as liquidity problem, but as time passed the shortage of liquidity drove many firms there into solvency difficulties close to a panic *via* counterparty risk.

In addition, with this crisis U.S. established the status as the debtor as well as the creditor, in the sense that the developed part of America gave credit to the developing part of America that depended on the sub-prime mortgage far ahead of all other debtors and creditors. U.S. became major creditor to U.S. herself, and at the same time she became ever bigger debtor to herself, in addition to other countries, aggravating the extent of global imbalance accumulated before this crisis. From now on U.S. should be made to play a double role both as the debtor as well as the creditor at the same time.

But unfairly enough, at least at the initial stage of dealing with the crisis the obligations of debtor so much emphasized to Asian debtors in 1998 were disappeared from the concern and autonomous measures taken by U.S. became prominent occupying front pages. The debtor's duty was extinguished as U.S. appeared as debtor, and there was no creditor demanding such things observed in the Asian crisis to her.

In the broad scheme of international management of capital movement, the individual debtors without exception should be requested to behave prudently as Asian countries were during Asian financial crisis. The drastic change that turned the request of prudential behavior to be non-operating all of sudden when U.S. appeared the debtor in 2008 crisis must be discarded from now on. U.S. should not be an exception automatically and permanently. A few measures tossed as to what creditors would do alongside with what debtors would do may better be brought in. Moreover, when the fact that U.S. is the really serious debtor country concerned with the issue of the global imbalance and the possibility of hard landing is to be recalled, the need appears more imminent and significant.

In devising better ways of managing international capital movement in a fundamental way the old discussions on how the creditor from whom the capital originated and the debtor to whom capita destined should do individually and then cooperatively should be digested with enhanced seriousness than before. Asymmetries between the debtor U.S. and other non-U.S. debtors must be reduced. More transparency and deleveraging must be pursued by the both simultaneously, and common regulatory scheme must be applied to them, at least with respect to rating (including less reliance on privileged rating agencies enforced institutionally), clearing of derivatives, and common financial architecture.

U.S. huge current account deficits have been significant concern and will be more significant in the future when the various effects of 2008 financial crisis were taken into account. Previous discussions that explained the global imbalance primarily as the reflection of the choice Asian countries had made to expand exports in the guise of neo-mercantilism or the appetite for developed financial products cannot be sustained further. U.S. new position as a less special country than before with the ill-service to other countries besides the Europe's relative rise must be taken into the new picture constituting a background for fresh start of discussions on global cooperative system.

As the degree of globalization and intensity of the global imbalance would be more amplified after a few years of U.S.'s much more aggressive stimulus effort than those of others, the debtor status of U.S. will become more vivid. In resolving global imbalance the obvious fact that U.S. is a serious debtor (even though it is somewhat unnatural to regard U.S. as conventional sovereign debtor) must be seriously taken into account. Therefore the old logic on transfer problem discussed about with German reparation problem after World War I must be recalled in the sense that the debtor would have to be transferee to receive quite much of real resources to overcome the status yielding the transfer problem. U.S. would be the major beneficiary from the transfer, which in turn may lower U.S. debts to others through dollar depreciation expected from her aggressive stimulus packages.

In attaining the outcome, a hasty neglect of the cooperative possibility between creditors and debtors is not warranted. In spite of many past explanations why the global imbalance was not as serious problem as usually thought and many claims that such a judgment has been vindicated by the fact that hard landing has not yet been observed until present time, the previous optimistic views had to be modified to accommodate the new feature that U.S. is both debtor and creditor after this worldwide financial crisis of 2008. The global imbalance magnified after this crisis may accelerate the real hard landing.

The hard landing would involve dramatic price changes in many economies pioneered by U.S. dollar depreciation, in reflection of U.S. massive fiscal stimulus package far larger than others' and her smaller real debts after the transfer. It implies nothing but a vast liquidity glut on this globe much larger than the size of glut pinpointed by Bernanke before the crisis, hinting a danger of worldwide inflation sooner or later. Its magnitude would surely be very huge. Moreover, it is painful to notice that there is no easy ways to undo it when the U.S. wants to curtail inflation later, since the monetary expansion mainly takes the form of Federal Reserve purchase of long-term government debts and mortgage backed securities. With longer maturity of long term government bonds than the period of materialization of inflation expected to be of 18 months or so and small marketability of mortgage securities, the inflation once generated by the stimulus packages to fight against deflation would stay put thereafter.

At the same time, when the transfer problem is recalled, it must be made to involve some transfer from the rest of the world to U.S., as U.S. would remain a major economy even after this crisis being much more important than losers in the World War I. With some transfer, though, the asymmetries between U.S. and non-U.S. economies as for a debtor will be diluted. This aspect of ameliorating remaining asymmetries to some degree may be much important to Asian economies, as at the 1998 financial crisis they faced difficulties noted to have originated from their failures while they happened to experience spill-over hardships from U.S.-originated crisis this time. Indeed, they would have experienced relatively smaller sacrifice than otherwise if the amelioration from the external spill-over of current financial crisis was not there.

New positive measures have to be taken on the ground that both U.S. and non-U.S. are treated more symmetrically. In consideration of many self-help measures taken in 2008 by U.S. to avoid credit freeze and to sustain liquidity flows through sectors of her economy, other similar self-help measures of their choice in non-U.S. economies in parallel to the U.S. choices must be warranted. The decision by China and Russia to use their currencies as for the invoicing vehicle of their trade would mean a first step of this kind deviating from the tradition of using U.S. dollar for the most of international transactions. In addition, the extended swap arrangement which does play a role of de facto inter-bank market in today's global community would better be further utilized to comprise many emerging economies (beyond G7 and a few others) in view of the extended vicious circle among developed economies and developing economies. In this sense, the swap arrangement between U.S. and such selected emerging economies as Brazil, Mexico, Singapore, and Korea looks another positive step in this dimension, but it should be expanded further. It is critical as a way to formulate a global inter-bank market, especially when the swap between U.S. Treasury Bonds in the external reserves of emerging economies with U.S. dollar cannot be guaranteed.

Newly devised IMF's short term liquidity facility for providing dollars to emerging economies would better be taken into account in this context instituting a move for IMF towards the direction of global central liquidity provider. The move for the Asian currency needs to be reattempted, too.

Freedom to respond to exchange market pressure in choosing an appropriate mix between exchange rate variation and reserve variation could be more widely allowed. New additional means to facilitate credit circulation to obviate credit squeeze at its root should be investigated and the other good means might be gladly introduced. Preparatory means could be devised cooperatively and simultaneously to avoid regulatory arbitrage. Deposit insurance to restore trust of depositors could be made necessary to all countries with a little variation in the country-specific measures. Consolidated supervisory authority to take care of daily regulation and to monitor work-outs should be made available with accompanying necessary information on global market happenings.

In the meantime, it should not be forgotten that both the massive liquidity newly supplied needed to be distributed into many individual countries to prevent a stopping/standstill of credit circulation and so is the supplementary swap arrangement which has constituted a de facto international inter-bank market. More swap arrangements could be supplemented with some flexible contingency facilities.

In view of the notion of hard landing denoted above, it can be reasoned that the hard landing is nothing but one that has increased its significance after 2008 global financial crisis in the form of dollar depreciation potential, as U.S. would have been the most aggressive in carrying demand expansion than others. She would rightly pursue strong stimulus packages to prevent deflation ahead of the worry on the fiscal soundness. The U.S. fiscal problem resulting from it might bring international crowding out. This will accelerate dollar depreciation in the end. When the fact that the major part of newly added liquidity is in dollar (reflecting U.S. rescue financing and most swap arrangements are main component) is confirmed, the big depreciation of dollar is easily expected. The bigger the dollar depreciation is, the higher would be the chance of hard landing. This enforces us to coordinate the current concern on depression from credit squeeze with the danger of hard landing accompanied by severe inflation.

It can be speculated that the global imbalance would be partly resolved with quite much of dollar depreciation. In that way the real debt burden of U.S. can be lessoned on the one hand, and that the still remaining U.S. external debts would be diminished over time with U.S. effort to increase savings towards the resolution of global imbalance on the other.

Last, but not the least, it is observed that financial crises in developed economies had hurt even very poor developing economies. Accordingly, it would be imperative to consider an ODA (official development assistance) type stimulus package (in the form of vulnerability fund) destined to those unable to afford either bailout or deficits on their own, in order not to abandon them.[18]

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