

Global Financial Crisis & Implications to Thailand:

An ex-Banker's View

By

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Abstract

Central to the current global financial crisis is the **endogenous risk** generating and amplified *within* the banking system and credit market. In the past boom and bust cycle caused by excessive speculation is localized and caused by **exogenous risk**. **Securitization process** has spread out the risks to every part of the world. In the deregulated global finance, all banks' balance sheets are interlocked and cascaded by common factors. De-leveraging process (D-process) become self-perpetuating process. Typical monetary policy becomes ineffective. A "well judge" fiscal spending for pro-productivity growth policy beyond central bank's mandate is strongly encouraged for long wave peace and prosperity. Neither a new administration nor another fiscal package may provide a clear resolution to the crisis unless global banking and international capital market begin to function again. Global financial crisis is transforming to global economic crisis that need a global solution or at least a regional one. Blanket deposit insurance, Basel II compliance and IAS 39 amendment are among the topics of discussion in this paper in Thailand's context. A new way of coordinate public coordination policy should be thought out systemically as many lessons should be learned from the 1997 crisis episode. Internationally, this global crisis requires global solutions with regional partners. Asean + 3 originated ABC (Asian Bank Corp) Bank and ACU, Asian Currency Unit with Asian regional currency backed up is discussed as a new currency stock for a new era for more equitable Asian role in the financial world. The experiment with this idea is fine, but one should not lose sight of openness and market friendly policy as the core value.

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I. Introduction

Central to the current global financial crisis is the **endogenous risk** generating and amplified *within* the banking system and credit markets.² The epicenter of this turmoil is in the US and spreads to Europe and to all major financial centers around the world. Lately, emerging markets together with Thailand are not being spared from this very painful reality. Financial distress is prevailing in every sector as the credit market is being frozen. Consequently, the prices of all assets and commodities are collapsing. This debacle is quite different from most of the previous crises including the 1997 debacle where most of the shocks were usually **exogenous** or *outside* the financial system (e.g. capital flight, fiscal deficit, political turmoil, etc.). To be able to resolve the current crisis is to understand the difference between the two shocks.

Global imbalance, lax regulation, cheap and plentiful credits are among the standard and common explanations for what has gone wrong today. This paper does not focus on these. Instead the paper is to provide a perspective from a bankers' point of view where ***the greatest damage is done via endogenous risk***. What really starts with good intentions for sensible macroeconomic policy and micro-prudence banking management and accounting disclosure turn to *exacerbate* to global financial catastrophe with eventual global economic recession. About \$10 trillion (trn) of assets shed their value or 14.5% of the stock of bank credit in 2009 will be lost internationally according to the IMF's "base case" estimation. As of Oct. 08, \$600 billion (bn) of credit related losses have been written down and \$430 bn of new capital has been injected in global banking system, mainly in US and European nations. Hence, I would briefly clarify what had caused the failures of Bear Stearns, Lehman and credit market. I would brief on the global policy responses. And what are policy implications for Thailand?

The next section is described the interconnected world of banking and financial institutions. The fair value accounting treatment is discussed and its impact in the following section. As the credit markets has failed around the world, the third

² See more discussion by Danielsson and Shin (2002)

section is to update the report, while the fourth is to examine the various governments' policy responses. The implications for Thailand are to be presented and discussed subsequently. The last section will conclude.

II. The Small World of Banking:

Traditionally, **commercial banks** take deposit and give lending. Apart from taking cash deposit from *retail* depositors and other fund providers, banks also receive funding from other *wholesalers* through inter-bank, promissory note loans and others. This books on its liability side. Together with its equity, banks extend loans and credit to *trustworthy* fund users (e.g. household, firms, etc.). This books on its asset side. Banks do lend and borrow from each other significantly and relentlessly as the financial market becomes sophisticated and global. To manage their risk profile and to seek higher return, banks additionally trade derivative financial products (e.g. foreign currency forward, interest and credit swap..) among themselves and with other institutions. These financial transactions are done continuously around the world, namely in financial centers like New York, London, Hong Kong, etc. **In short, banking system is a network of interlinked balance sheets.**

Bank is also a financial intermediary. Banks would originate the loans, package them, warehouse them and sell them to the final and typically passive investors (e.g. insurance, pension fund..), often cross border in special purposed (financial) vehicle or SPVs. As the securitization process becomes so efficient, banks cannot keep up with the exponential growth demand as shown in Fig. 1. After all prime mortgage borrowers have been nearly exhaustive, still banks need to expand to meet more balloon demand. Banks began to lower their lending standard - to give credit to *sub-prime borrowers* and extend to *other loans type* (e.g. credit card, car leasing..). On the product side, banks bundle various asset back securities (ABS) – prime and sub-prime - into SPVs to hold these assets and claims that verified by the third party credit rating agency like S&P and Moody. On the equity side of these SPVs, banks would sell in different tranches for different investors at different premium in a complex deal structure of collateralized debt obligations (CDOs). This price differentiation works well to serve each market niche demand and risk tolerance

in order to maximize their profit. Yet this often means risks ending up in the wrong hands that cannot handle or manage their own risk, as claimed by “the greater fool” fallacy of Morris and Shin. Fig. 2 demonstrates the basic ABS CDO financial product structure in multiple layers and claims to serve every possible market niche and to capitalize all possible steps. Every part of the chain wishes to pass the risk down the next layer and to profit as quickly as possible. **In one sense, the American housing market is the source of the greatest \$ based debt excesses** where the American government is *relentlessly* and *carelessly* pursuing the “*affordable housing*” policy.

More importantly, to pursue higher yield and to manage its credit default risk and other risk - interest risk, market risk, etc, each financial institution would trade among them and often hold directional view trading position on their books. One estimates that the total credit-default swap (CDS) market where investors supposed to buy insurance against corporate default had its total notional principle around \$55 trillions (trn) in 2007. This is may be colossal. But in fact, CDS market is just a small part of worldwide derivative market estimated to be USD600 trn or 11 times world output at the end of 2007 as surveyed by Bank for International Settlement (BIS).³. In essence, **investment bankers** would selectively hold or sell down their loans and credit swap according to their risk appetite and capital constraint to maximize its return. **In short, investment banks’ securitization process becomes one gigantic credit creation chain until no one really knows who is the end borrower as a real person.**

As banks extend credit easily to households regardless of their creditworthy in pursuing for high return and hope to pass along their risks to others, bubbles are forming in housing and other asset classes as everyone – from borrower to broker, originating bank to rating agency, from investment bank to investor – tries to make profits and speculates along the chain of *credit formation*. The US Debt to GDP ratio by every sector, especially households and financial, has soared as depicted in Fig. 3. Moreover, US GSE or Government-sponsored-enterprises (e.g. Freddie Mac,

³ The estimate of the CDS market was quoted from The Economist, Sept 18th, 08 issues. In this article, it also quoted that Mr. Warren Buffet once said that derivatives were financial weapon of mass destruction. More discussion are available at Global Financial Crisis Survey at The Economist, Oct. 9th, 08.)

Fannie Mae, etc.) has joined the foray as the demand escalated. Fig. 4 indicates about half of over \$7 trn obligation are held by the leverage and non-leverage US financial institutions. The securitization process becomes **a chain of agency problems** and **a channel of financial contagion** as the defaults becomes widespread along the chain. First, it was the sub-prime loans and CDOs defaults. Table 1 indicates the breakdown of the US Sub-prime loan exposures. Insurance companies, US banks and US hedge fund are the principal debt holders totaling USD 877 billion (bn) or 64% of the outstanding. Some 16 % are for international participants. In short, **Securitization is instrumental to spread these toxic assets to everyone and everywhere.**

With the mammoth scale and the complexities of thousands of different MBS, the legal documents were very thick and incomprehensible. Once the deal is in default, legal claim and settlement are very messy, long and complicated. Asset valuation against various residual claims may be only few, if not none, to understand. The workout process is nearly impossible. Without true market price revelation, high uncertainty has persisted and **the individual's react** to the situation in financial system has been to be more risk adverse. Then the crisis began with the fall of Bear Stearns and Northern Rock in 2007 originated by **the run on the liabilities side** as claimed by Shin (2008). As of Nov. 30, 07, the 7th largest investment firm, Bear Stearns, for example, has only \$11.1 bn net equity to support \$395 bn assets with off-balance sheet notional contract size approximately \$13.4 trn. The 35.5 to 1 leverage ratio balance sheet led to rapid diminution of investor and lender confidence when the market turns against them.⁴ Banks and wholesale fund provider simply stop lending money to both troubled banks and later to each other banks as uncertainty increases. Credit squeeze has reined as banks and other financial institutions try to hold on to cash as their buffer. The initial public policy makers' responses were slow and ambiguous and could not stop the cascade of counter party risk. Consequently, the network of banks' interlocked balance sheets has fluctuated widely with the bad vibration of the credit spread and asset price. When the liquidity for CDOs and other credit markets have dried up, no real price discovery can be uncovered. The financial market distress is feeding back depressingly onto itself. The viscous circle begins and

⁴ See more discussion at http://en.wikipedia.org/wiki/Bear_Stearns

negative externalities spread out across border until the LEH (Lehman Brothers) filed for bankruptcy protection on Sept. 15, 08 and next day Fed had to rescue AIG (American International Group), the largest insurance in the world with \$1.05 trn total asset as of June 08. At the first LEH auction of the CDS auction in the liquidation process conducted by Fed, **only 8.62 cents to a dollar** of the contract value are recovered. These assets are, indeed, priced at the distressed levels unlike newly nationalized Fannie & Freddie whose debts are traded at high 80 to 90 cents to a dollar face value. In nutshell, the CDS market participants face adverse selection problem where asymmetric and fragmented information are high. Eventually, on Oct. 21, 08, LEH settled its various creditor (AIG as one main customer) who purchased CDS estimated to be in between USD 100bn to USD400 bn, in the order of mere USD6bn though many both long and short positions were netted off.⁵ Damages are done, but the aftermath with cascading intertwined financial statements just escalates. For that reason and more, all credit market has been nearly frozen by Oct. 2008.

In short, credit, not just money, is the bloodline to financial and banking system. The securitization process has become efficient and effective *credit creation* to spread out around the world. Easy money and abundant liquidity has fueled the global economic bloom and growth, especially in US dollar debt bubble. With interlocked balance sheets of banks and financial institutions, the global financial crisis is transforming to be global economic crisis. What's not so obvious is the next section in which exposits how the sound macroeconomic policy and good micro-prudent regulation has *exacerbated* the situation to be global economic recession.

⁵ See more discussion at "http://en.wikipedia.org/wiki/Lehman_Brothers

III. The Fair Value Accounting:

The first basic accounting principle is to present financial statements as consistently as well as accurately as possible in a timely and fair manner. The fair value accounting or **mark-to-market (MTM) approach** under its codified name as IAS 39 was invented to replace the old historic-cost method as the financial world is expanding enormously as well as perplexedly⁶. In simplified sense, the fair value accounting is to *dynamically* use the market based pricing for all assets, liability and off-balance sheet financial items at the end of period instead of the historic-cost method or *static* purchased price. In normal and liquid market, the MTM provide more accurate and timely disclosures for prudent management and prompt corrective action. Thus, the fluctuations in recent price of asset, liability and contingency claims impact balance sheet and earning materially and directly. Executives and regulators would attend to their causes to resolve and handle in due course. In theory, this market discipline will mitigate agency problem in the firm. The accounting numbers provide *certification* and improve the *justification* of action. Even so, in the boom time, for instance, Barclays Bank management took the record performance fees as it booked its record gains of USD 1.3 billion on its liabilities in 2007. On the other hand, in 2002 a few European insurers faced a solvency crisis as the stock market plummeted. Specifically, write-down on losses would be done on income statement and reduce the balance sheet size. Firms may have to either re-capitalize or bankrupt. It appears MTM has been tested over time. So, why does MTM matter now?

This global financial crisis is *not* typical crisis. Normally, the boom and bust cycle from speculative excesses is intensely concentrated in one area and may have limited contagion to another region. After securitization and decentralized global financial system, this becomes truly the first global bubble and burst crisis. The turmoil impacts are now spreading everywhere and cascading its damage to interlocked balance sheets of finance and non-finance firms. The credit market has become dysfunctional and takes banks and other financial markets spirally downward

⁶ IAS is the International Accounting Standards. IAS 39 is the standard for financial instruments to be recognized and measurement in fair value principle. For more technical discussion see Fujoka, Seko and Hoontrakul (2008)

with it. As mentioned earlier, nearly all the major banks' financial statements are intermingled as they tend to borrow, lend and trade among the themselves as shown in Fig. 5a. The demise of LEH and Bear Stearns had seriously shaken the financial market in term of size and the speed. Judging from the 2007 balance sheet as evidenced in Figure 6 and 7, both US investment bankers had only 3% equity of the total asset. Nearly 40% of both firms were involved with collateralized lending and borrowing between banks and financial institutions apart from astronomical notion principle of off-balance sheet trading and netting positions. As the central bank tried to raise interest rate to cool down their economy and to fight inflation fueled by speculative high commodities price, particularly oil and food, these banks' balance sheets are *propagating* adversely among themselves. Sub-prime loans began to default at progressive rate and CDS spread is swiftly widening. MTM creates negative externalities in form of financial statements spillover and domino-like effects as shown in Fig. 5b. Therefore, five common concerns are highlighted 1) counter-party exposure, 2) MTM for more write-down, 3) liquidity and capital, 4) credit quality and 5) regulatory issues. Each individual banks' reaction is rationally to withdrawn from the market and hold on to cash. In nutshell, Bear Stearns and LEH face a run from *wholesale creditors* and collapsed eventually as illustrated in Fig. 5c. Hence, the macroeconomic monetary prudence was the trigger to *punctuate* the \$ debt balloon, while micro-prudence accounting and bank supervision *exacerbate* the financial distress as proven by Plantin, Sapra and Shin (2005) and Shin (2008).

In short, the fair value accounting is a market-based method and pro-cyclical credit creation. MTM works well during the normal market with typical *exogenous* shocks to the system. But it may amplify many-fold *endogenously* through the extreme shocks and rare event such as the ongoing global financial crisis. In other words, MTM may fuel the boom in virtuous cycle and the converse is true.

IV. The Public Coordination Failures and Int'l Policy Responses:

Preventing the financial bubble is always the best solution if one assumes the central bankers (and policy makers) have perfect far sights. But no government would like to spoil any jolly parties. Then the next most important policy response in any financial crisis is to stop the panic in the timely manner. Emphasizing corporate governance, moral hazard and accountability are among the examples of the wrong issues to be focused during the crisis. These matters must be handled later after the crisis management is over. Failure to seize the initial moment would be critically damaging and prohibitively costly. Often these damages (e.g. no funding for schooling and healthcare, etc.) are irreversible with high impact in the long run peace and prosperity.⁷ Each day gone by without proper and credible policy response, the more damage the banking system is *amplifying* pessimistically onto itself as each individual react rationally retreating from the market around the world.

At the onset of the financial disaster, Fed has maintained that massive liquidity injection would save the banking system and financial market. Figure 8 has shown the list of innovative ways (e.g. term securities lending, discount window, cross currency swap facility to central bankers, etc.) to provide liquidity to the system during the episode of Bear & Stern demise. After weeks long political struggle in the Capital Hill, the Troubled Asset Relief Program (TARP) was enacted for USD 700 billion bailout scheme. The plan is supposed to stabilize the securitization process by purchasing the illiquid ABS CDO asset or so called **“toxic asset”** and re-capitalize banks toward the end of Sept. 08. Still the financial distress and panic are spreading across US to Europe and soon to be around the world. Credit spread has elevated materially as indicated in Fig. 9a; the European money market is in distress as in Fig. 9b; and Citi US rate liquidity index as in Fig. 9c has deteriorated to the recorded high second only to during the Great Depression period. Essentially, since it is any body guesses on how to value the CDO and other structure derivative products in illiquid

⁷ See discussion on Stiglitz et al (2008)

and stressed market, everyone becomes extremely risk averse as every banks' balance sheets may be in shamble. Vicious cycle of shrinking balance sheets has negatively feedback into the system. **Credit squeezes and liquidity dissipates.**

The solution to ease the liquidity thirst and credit scare is interestingly coming from a small European country at the end of Sept. 08. Irish banks came back from the brink of collapse by the corrective policy response to guarantee all banks' liabilities – retail depositors and *wholesale* fund providers for the period of two years. Fig. 10 displays the effective of the policy as the CDS spread plunged. Since the operating condition has been very difficult worldwide, the only way to re-capitalize these banks is either to be nationalized in some degrees or to sell its preference (quasi-debt) equity that basically guaranteed by its respected government. In other words, the adverse selection (e.g. which bank is going to bust) was resolved by the third party guarantee – its sovereign nation. The following week, UK had pursued the Irish scheme with some modification of its own for capital injection in a form of preference equity and market based fee. Soon after, Fed and many other nations go along with the Irish model variant. On Oct. 21, 08, both Singapore and Malaysia, for instance, announced blanket all banks' liabilities until Dec. 2010 only days after the Hong Kong had done so. Effectively, without blanket guarantee from the sovereign governments, a run on the liability side of the bank would not be abated.

However, many emerging markets are less fortunate with little hard currency in reserve and public finance strength to give such blanket guarantee. They could not shoulder these new responsibilities. Pakistan, Ukraine, Hungary and Iceland are among the latest casualties that called upon IMF support. Initially in exchange, this time IMF first is asking for *public finance reform conditionality*. Turkey, Romania, Indonesia and Philippine might be next on the casualty list. On Oct. 23, 08, Deutsche Bank estimated that IMF would have enough cash to bailout additionally at most 14 emerging countries in the midst of de-leveraging and increasing global systemic risk. It remains to be seen how new IMF fund estimated to be in hundreds of billions for emerging markets would come from. Lately, by the end of Oct. 08 both IMF & Fed announced a new facility to provide \$250 bn currency swap with qualified nations up to 5 times country's quota *without* "conditionality". But there is no new fresh funding or un-funded mandate. Still, Hungary received IMF-led \$25.1 bn on Oct. 28, 08 with

public finance reform conditionality or days after bailing out Ukraine as the current shocks swept the Eastern European.⁸ On the next day, the central banks of Brazil, Mexico, South Korea and Singapore accept the \$30 bn currency swap lines from the Fed unconditionally. The big two questions are how many more of the fires are out there and how the Fund (and Fed) is going to find its fresh new cash capital.

Furthermore, as the credit market evaporates, de-leveraging process (d-process) is on going. Housing prices in US and Europe are collapsing because of the lack of credit and effective real demand. Speculative positions in commodities financial market like oil and corn are unwinding. In the real world, most of international physical trades, especially in commodities were temporarily interrupted. Many oil tankers, for example, were at sea without destination by the mid of Oct. 08 because few buyers have accessed to credit and cash to fill their obligation in the midst of the falling prices. Even OPEC announced its production cut by 1.5 million barrels per day in the third week of Oct. The oil price is still plummeting as shown in Fig. 11a. Metal, coal and corn are also at 30 to 50 % discount from their peaks in matter of weeks as depicted in Fig. 11b, c. Steel, fertilizer, business outsourcing, real estate property and other assets are sharing the same faith as no cash or credit is going around. The MTM losses from its outstanding position based on these illiquid traded prices must be written down on the firms' books. Facing tremendous equity wipe out, many firms may be forced to bankrupt. In nutshell, when banks find it difficult to borrow, so does everyone else. And when bank does get their funding from the governments' support and the credit spread narrows or stabilizes, bank still has a tough time to lend in this unfriendly environment and distress period.

In sum, the *public coordination failures* have aggravated the crisis at the onset. Fed was fixing the wrong cause with its ad hoc approach and reluctant Capital Hill partners, especially in the beginning. Massive liquidity injection and quantitative monetary easing in multiple channels and concerted policy rate cut around the world fail miserably to prevent further deterioration in financial turmoil. What really matters

⁸ Specifically, IMF has promised to provide \$15.7bn, EU for \$8.1bn and the World Banks for \$1.3bn. All are subjected to Hungarian government passing the pending law on fiscal responsibility.

is how to evaluate the credit worthiness of the interlocked balance sheets and the damages of the toxic asset like CDO and CDS. In a few words, adverse selection matters. Third parties guarantee from the government help to resolve the banking problem. But what's about the private cooperates, particularly small & medium enterprises (SME). As global economic recession intensified, one may conjecture political instability would be soon followed and may be spread internationally as the pre-text for unrest, chaos and even possible war as parallel to the Great Depression.

V. The Policy Implications for Thailand:

The distinction between exogenous and endogenous risk is critically important to appreciate the importance of policy making. Comparing the two types of risk with game of “**roulette wheel**” and “**poker**” may be useful. In a fair game, roulette is a game of chance against nature. Each spin is randomly and independently from another spin. It is determined outside the system. This is *an exogenous risk*. Estimating the probability of outcomes from the past data is possible. Stress testing in this shock is simple with expected losses. On the other hand, the game of poker is depending on 1) the player's reaction to the card draw (or the market) and 2) where the players' (e.g. bankers, traders, regulator..) action affects the outcomes. In this game, the uncertainty is generated and *amplified* by the response of other players as the events unfold. Intelligent risk management (or poker skill) rather than pure statistical analysis is critical to tackle this *endogenous risk*. Things would be more complicated when these players start to lend and borrow among themselves as stakes and emotions may increase many-folds. Hopefully, this gambling analogy may serve well to explain the below when some of the past policy and government responses to the market turmoil are to be discussed and examined below:

a. **Deposit Insurance Issue Policy In Thailand:** Deposit insurance system is designed to protect the unsophisticated *retail* depositor against bank failures. The risk based insurance premium is calculated based on all deposit taking, not wholesale funding. The implicit key assumption is the *exogenous shocks* (like capital flight, political disorder, etc.) from *outside* to the banking system. Like the game of roulette, once in awhile, there is randomly a jackpot to be paid out and the

mess may be cleaned up. With the existing global financial crisis, the banking and financial system are facing the **endogenous shocks** that are generating and amplifying *within* the system. Not one, but partly or whole banking system may be impaired from common factors *cascading* within the system as every players lend and borrow among them. If banks do fail from this cause, eventually deposit insurance agency has to take responsible anyhow as Ireland and UK has done. Since central to the global banking difficulty is on *the wholesale funding and trading* and not just retail funding, the endogenous risk may not be overemphasized.

On Oct. 28, 08, Thai cabinet approved a delay for two more years in the reduction of deposit insurance to be until Aug. 2011 despite of the sound Thai banking system. This is fine to be in line with our neighbor countries in some extents and to safeguard Thai banks' competitive position. The pressure on banks, especially the small banks to compete for deposit and cost of funds would be somewhat eased off. This may detain the "walk" from wholesale fund providers (e.g. high net-worth, mutual fund, large corporate, etc.) that slowly take money out from deposit and to place them back into government treasury note and bond as evidenced by steadily decline of the bond yield during Sept and Oct. 08. What Thai government has not done is to guarantee the wholesale funding like money market and other liabilities like in Irish or UK case. It remains to be seen how Thai interbank market and swap market that lately has been illiquid and thinly traded would negatively affect Thailand banking and real sector. The absence of liquid interbank market and active foreign banks and MNC (multi-national corporate) participation capitulates no practical tool to hedge. For example, fixed Euro interest rate or USD/THB forward rate for 3 months period or longer may not be readily available. Short sighted and reactive to the high volatility market movement may be over-reacted unless Bank of Thailand would once again become the market maker of the last resort. Respectively Deposit Insurance agency and Bank of Thailand (BoT) may also charge additional **premium based on the system-wide risk** and *wholesale* funding liability of each bank and **its market making service**. Both would encourage balance for more balance funding sources. Mechanism and way should be thought out systematically as crisis is revealing itself to prevent and to contain this probable contagious effect.

b. The Basel II: This accord is designed to solve the default problem by borrowers and focus only on the asset side. The capital as the buffer aim to protect retail depositors is required accordingly to the riskiness of banks' asset – mostly loans. One of the Basel II cores is to estimate the credit default risk of the individual borrowers and firms. With the law of large number, statistically one may calculate its expected value to set a risk based capital requirement and to limit or provision for this potential loss. This again is exogenous risk equivalent to play “roulette” or the nature randomly and independently reveals itself. On other hand, today banking and financial system has the interlinked bank balance sheet. Again like playing “poker” where the reaction of another player matters, not just the random chance, the endogenous risk is at work. Yet Basel II has set no provision on interbank lending. One fundamental risk like interest rate shifts may materially elevate the leverage and credit default probability and credit availability as these balance sheets were propagated and amplified. **No system wide risk and capital requirement is heeded.**

Another backbone of the Basel II is the concept of **value at risk (VaR)** as a way to aggregate risk across bank. VaR is, in sum, defined as the maximum loss on the portfolio over the time horizon in a given estimated probability.⁹ Once more, the implicit assumption is exogenous risk or the “game of roulette” because each portfolio is treated independently and each product is equally assumed to be in equally liquid market. This may not be an accurate measure for the risk of the current propagating banks' balance sheet and financial market meltdown. In addition, the VaR measurement tends to be low in boom time and vice versus. Thus, the method like MTM is pro-cyclical leverage. The trouble is also the accord gives the risks assessment to banks themselves and credit-rating agency. As discussed on securitization chain, this process may create **chain of agency problem** unless proper procedures and truly independent third party oversights are in place. Finally, referred shares and subordinated debt are counted as a part of the capital. Over again the current failure of banks is mainly caused by the run on the liability side (i.e. no lending among banks themselves).

⁹ See more discussion at http://en.wikipedia.org/wiki/Value_at_risk

What Basel II has done sensible is to require capital for off-balance sheet items depending on their risk profile. MTM trading book plays the key role. Should Thailand postpone the Basel II then? The simple answer would be “no”. Instead we should include more regulation and oversight on leverage ratio calculation, risk and capital measurement. Perhaps, as suggested by Morris and Shin (2008), capital requirement of the banks should be based more on bank systemic risk. In technical term, bank should require to conserve capital not only on *the variance* (or risk) of the idiosyncratic risky asset matrix, but also to *the co-variance* (or co-movement) of the risk matrix. One also bears in mind that all asset classes (e.g. stock, corporate bond, real estate..) tend to move and fall together during the financial crisis as their correlation head toward one. It is particularly noteworthy that MTM would create the most damage when the product claims are long-lived, illiquid and senior as expounded by Plantin, Sapra and Shin. **In few words, banks that lend more to other banks and/or diversify their book through different risky asset classes should have high system weighted risk and asset duration based capital requirement.**

c. Adjustment & Fair Accounting: Market based accounting is appropriate, if the market is functioning properly. However the market is crashing; the liquidity is evaporating; and the extreme risk of global economic recession is becoming a real threat. Many policy makers have a second thought on this. First, on Oct. 13, 08, International Accounting Standard Board (IASB) has amended IAS 39 as its commitment to enhance market confidence in coordinated and timely manner. It allows the reclassification¹⁰, out of non-derivative financial assets that are currently MTM and accountable for immediate profit & loss, to be held to maturity in “**rare circumstance**” such as today credit crunch. This may be a second best solution, but certainly welfare enhancement. Second, more consult paper to enhance the presentation of financial statement are encouraged if reclassification is applied. Third, at the request of the Financial Stability Forum (FSF), an expert advisory panel was established by IASB to consider how to apply MTM when the market becomes inactive. Forced liquidation or distress sale will not be counted for MTM. Perhaps, net present value of the future cash flow projection with appropriately risk-adjusted

¹⁰ These reclassifications were already permitted under US generally accepted accounting principles (GAAP) in “rare circumstance”.

discount rate may be acceptable when other observable price discovery is not available. Relying on MTM in inactive market may indeed distort the real market price. It is imperative for Thai authority has a pro-active resolution on this accounting principle before the massive balance sheet destruction is done beyond repair.

d. Rethinking about Liquidity Concept and Government Responses to Financial Crisis: Liquidity may be measured in term of balance sheet size, rather than idle cash or ability to raise fund. As the credit is being created, the asset size like property, bond, etc. is increasing. Cash is important, but the multiplier effect and credit formation are also critically more vital. The main channel of contagion and liquidity propagation becomes the change of asset prices (e.g. stock, bond, real estate, etc.) in modern day accounting, even with the IAS 39 amendment as shown in Fig. 12 a and b. One should harness positive externalities to promote virtuous circle rather than otherwise. Below are its implications and discussion on the policy responses.

First, fire sale of asset depressed price and decrease liquidity. This case may be for Thailand when BoT imposed strict for banks to dispose all non-performing loans and asset (NPL/NPLA) within 10 years regardless of market condition. Hence, the liquidity is constrained. Simple allowance for reclassification in accounting and some relaxation on some "rare circumstance" cases may selectively resolve this issue. Moreover, the land re-valuation in annual basis may be changed to every two-three years or use the moving average of 5 years as the new basis for banks' book. This may mitigate the risk of mis-pricing these real estate holdings in illiquid market. Thus, the balance sheet damage may be limited.

Second, seemingly micro-prudence banking regulations in time of high uncertainty, strict write-down clause in qualitative asset quality downgrade further shrink the balance sheet. This may appear to enhance the soundness of individual bank, but undermine the stability of the whole system since the liquidity evaporates and economy contract. More sensible approach is to seek the middle ground in regulatory to lose credit constraint during the market turmoil because the cost of the undesirable outcome is much higher as experienced in the 1997 crisis. A few nationalized banks and the cost of banks bailout in the aftermath are still BoT's heavy burden today.

Third, the power of central bank is to manage the monetary based and liquidity to the economy by cutting its policy interest rate and injection liquidity into the system. But commercial bank provides the conduit from the central bank policy to the real economy. During the normal business downturn cycle, this is fine. During the financial chaos, this will not work. Skittish banks may hoard cash and stop lending to households firms and among themselves, the system become dysfunctional as the D-process is still undermining the banking and capital market internationally. Unlike typical recession with economic contraction, D-process is a self-reinforcing economic contraction driven by de-leveraging. The normal approach of cutting interest rate may not resolve the cash-strapped firms and households though it may ease off pressure from trouble banks as scare banks become increasingly risk avert. BoT may lend directly and temporarily to the firms. To minimize credit default risk, BoT may, for example, purchase the commercial papers (e.g. promissory notes, bond, etc.) of the state-owned enterprises (e.g. PTT, EGAT, etc.) in the open market. Furthermore, Thai government agency may step in for SME loans guarantee programs for risk sharing program between banks and the state agencies (e.g. SME Banks & the Small Business Credit Guarantee Cooperation) as done successfully in the 1997 crisis aftermath. Banks capitalize on their skill to originate loans, while the states become the guarantee of the last resort. Risk based premium and risk-sharing scheme should make both banks and agencies have incentive compatible. It is far easier to stimulate the economy with credit extension than without it because of money multiplier effect.

Last, but not least, all fiscal stimulus measures need public funding and commitment - both on and off balance sheet - burden to all taxpayers. Public finance would always “crowd out” private investment finance in some senses as both are competing to expand their balance sheet. On one hand, *a “well judged” fiscal stimulus for productive public investment* with a clear beginning and end (e.g. mass transit system, energy conservation investment, water irrigation system for agriculture, etc.) may be good to revive its economy. *This pro-productivity growth policy*, beyond central bank’s control, can ensure our long wave cycle of peace and prosperity. On the other hand, it is easy to spend today and worry about this later, particularly from political point of views. *A fiscal stimulus for consumption purpose*, especially with long term obligation may have aggravated the credit contraction problem by making the national balance sheet shamble. The obligations may have

contingency liability claims and adverse impacts on our nation, while the consumption does not generate future revenue despite of short term stimulus multiple effects. Consequently, these consumptive measures to tweak aggregate demand may reduce money flow and the nation potential growth rate. In short, sensible pump priming to jumpstart the economy is required to enlarge the nation balance sheet with future good income and enlarged tax base, not diminishing it.

e. **Some thoughts on International Economic Issue:** During boom time, monetary adjustment does matter. Behind the curve interest rate raising to cool down economy could be seriously damaging as currently witnessed. During the economic downturn, easing monetary may help eased off banks' pressure to re-capitalize, but it does not necessary resolve liquidity crunch in the aftermath. No fiscal stimulus would work well if the credit creation process is functioning properly. As the result of this turmoil, mostly banks in US and Europe has written off more than \$ 600 billion as shown in Table 2. Trillion dollars debt more overhang as indicated in Table 3. Only Portugal and Greece housing problem alone is equal to US Subprime loan problem according to Bridgewater newsletter issue on Aug. 15, 08. The overhang of all over European should be in comparable size with US. The most remarkable part is the emerging market bond yield and credit default swap. They have skyrocketed in competing with US banks and firms for \$ as shown in Fig. 12 a & b as both European and US institutions are repatriating their foreign holding and claims creating financial distressed to foreign fund dependent nations. According to State Street Global market about \$5 trn of foreign equity are, for instance, held by US investors. Western European investment is estimated to be even higher, particularly to Eastern Europe.

On the other hand, about \$ 30 billion loss is reported from the CDS and CDO for Asian Banks. With ample foreign exchange reserve as displayed in Fig. 13, Asia may have to rely less on \$ based credit extension and more on their own. Asia may have no luxury to wait for \$ or Euro based banking and capital market to recover from its financial ruins. It may be easier for Asia led by China and Japan along with the rest of Asean to collectively build a new super-bank or Asian version of the combination of World Bank and IMF dubbed (ABC Bank) with fresh funding balance sheet for the region. Staff and infrastructure may be bought over from the Asian Develop Bank and ex-Wall Street firm and talent. *Asian currency unit (ACU)* that might be backed by

the basket of Asian currency may be created as *a new money stock* to be credited, extended and to spread around Asian nations to build our infrastructure to improve productivity. With sizeable balance sheet, credit guarantee and credit creation may be done first with the help of expert from both the West and East in identifying the risk and opportunity sets in Asia. Country bailout program may be first supplemented or even lead IMF and World Bank initiated given terms and conditions. Just leveraging on ABC Bank presence would save much money, anxiety and political chaos from the current crisis as Asian experienced in the 1997 fiasco episode. Loan origination may be done in much later stage when the infrastructure – soft and hard - is in place.

VI. Conclusion:

The current global financial crisis is not a typical crisis with simple economic contraction. The crisis is caused by the **endogenous risk** generating and amplified *within* the banking system and credit market. In the past boom and bust cycle caused by excessive speculation is localized and caused by **exogenous risk**. This may be easily contained. In the past, another strong balance sheet financial institutions, rich nation, IMF or World Banks that have separated financial system may rush into rescue. But nowadays **securitization process** has spread out the risks to every part of the world. In the deregulated global finance, all banks' balance sheets are interlocked and cascaded by common factors like the fear of inability to price and to sell ABS CDO and CDS. As every financial institution reacts to the high uncertainty, banks stop lending to each other. Credit freeze and liquidity crunch. De-leveraging process (D-process) become self-perpetuating process as all institutions are forced to run down investment and risk participation (e.g. equity, lower grade debt, real estate..) most dependence on credit and liquidity and from long term credit vehicles (e.g. bonds, CDO..). Quantitative monetary easing, coordinated rate cut around the world and liquidity injection from the government may stem the panic and only stabilize the financial market, not a quick end to the worldwide recession.

Liquidity problems among the financial institutions may be eased off, but the real economy is frozen. During de-leveraging process (D-process), monetary policy by central bank may not be effective to revive the economy though it may ease off

pressure in banking and capital market. A “well judge” fiscal spending for productivity growth policy beyond central bank’s mandate is strongly encouraged; the fiscal stimulus for consumption is strongly discourage. Neither a new administration nor another fiscal package may provide a clear resolution to the crisis unless global banking and international capital market begin to function again. Global financial crisis is transforming to global economic crisis that need a global solution or at least a regional one. Blanket deposit insurance, Basel II compliance and IAS 39 amendment are among the topics of discussion in this paper in Thailand’s context. A new way of coordinate public coordination policy (e.g. BoT’s middle ground regulation relaxation, SME loan guarantee, etc.) should be thought out systemically as many lessons should be learned from the 1997 crisis episode.

Internationally, the crisis time requires unorthodox measures. Fed and IMF have revealed their resilience and creativity to resolve the global financial crisis. Nevertheless this may not be enough because the global problem requires global solution with regional support. A new partnership among Asean with China, Japan and S. Korea should be pursued immediately to establish ABC Bank, the newly created mega development bank as the Asian version of combined World Bank and IMF roles. ACU, Asian Currency Unit with Asian regional currency backed up is presented for a new currency stock for a new era for more equitable Asian role in the financial world. The experiment with this idea is fine, but one should not lose sight of openness and market friendly policy as the core value.

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