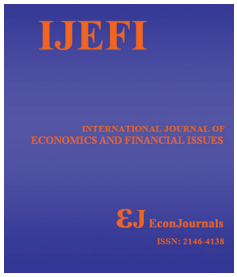


International Journal of Economics and Financial Issues

ISSN: 2146-4138

available at http: www.econjournals.com

International Journal of Economics and Financial Issues, 2016, 6(S3) 92-98.

Special Issue for "Asia International Conference (AIC 2015), 5-6 December 2015, Universiti Teknologi Malaysia, Kuala Lumpur, Malaysia"

Global Financial Crises: Origin and Management

Hock Lye Koh[1]*, Su Yean The[2], Wai Kiat Tan[3]

[1]Department of Financial Mathematics and Statistics, Sunway University Business School, Sunway University, Jalan Universiti, Bandar Sunway, 47500 Selangor, Malaysia, [2]School of Mathematical Sciences, Universiti Sains Malaysia, 11800 Pulau Pinang, Malaysia, [3]School of Mathematical Sciences, Universiti Sains Malaysia, 11800 Pulau Pinang, Malaysia.
*Email: hocklyekoh@yahoo.com

ABSTRACT

The world has witnessed a succession of three global financial crises in the past two decades. During each crisis, many financial institutions failed. Credit became either unavailable or too costly for business, as seen in the recent financial turmoil in Greece. Similar situation also prevailed during the 1997-1998 Asian Financial Crisis, requiring the International Monetary Fund to rescue Indonesia, Korea and Thailand. A major cause of these crises is the high levels of sovereign and corporate debts. Central banks were prompted to intervene by the injections of large liquidity with low interest rates into the financial systems. Cheap liquidity often leads to high asset valuations, a root cause of another future crisis. Cheap liquidity also might lead to future high inflation and unsustainable sovereign and corporate debts. This paper begins with providing a qualitative-quantitative appraisal of these three recent financial crises, beginning with the 1997-1998 Asian Financial Crisis, through the 2008 US Great Recession, and the ongoing global recession. We argue that the 2008 US Great Recession was an inevitable consequence of the action of Asian countries in building sufficient foreign reserves in an attempt to insulate the country from future external shocks. The 2008 contagious crisis quickly spread to the EU zone and ultimately worldwide. The paper ends with some suggestions for managing future financial crisis, with particular reference to Asia that entails the formation of a pan-Asia economic grouping to resolve unending currency issues and other trade related problems, with China and Japan playing the leading role.

Keywords: Financial Crisis Management, Sovereign Debts
JEL Classifications: G1, G2, G3

1. INTRODUCTION

1.1. The Evils of Moral Hazards

A major cause of many financial crises, including the more recent ones, is rooted in moral hazards in an environment of ample liquidity that can abruptly reverse the direction of capital flows, often triggered by risk aversion. Moral hazard occurs in a situation in which one party gets involved in a highly risky investment knowing that it is protected against the risk and knowing that other parties will incur the ultimate cost, should the investment fail. Ample liquidity provides the opportunity for amplification of valuation losses when the credit flows reverse, triggered by aversion to risks. The implicit assumption underlying a moral hazard situation is the immense reward accrued verses perceived limited risk incurred. This reward-risk imbalance promotes excessive risk taking that could ultimately lead to systemic risk when the large investments are inter-dependent and inter-linked within and across broad asset classes. Asset bubbles often precede a financial crisis. A main goal of this paper is to demonstrate how the evils of moral hazards amidst an environment of low-cost liquidity ultimately pave the way to a series of interconnected financial crises. The crisis began with the 1997-1998 Asian Financial Crisis that led to the 2007-2008 US Great Recession and the EU debt crisis, resulting in the current global economies' endemic growth. These lingering global financial ills have the potential of evolving into yet another global financial crisis in the very near future with even more dire consequences if moral hazards and the evils of cheap liquidity are not adequately controlled. We begin with a brief literature review of recent financial crises in the past two decades, triggered by abrupt reversal of cross border capital flows and turbulent currency fluctuations. We then describe the mechanism of how risky financial instruments such as mortgage

backed security (MBS) and credit default swaps (CDS) vastly amplify valuation losses when credit risk aversions take hold. The paper concludes with some suggestions on the way forward for emerging economies in Asia, by embracing a pan-Asian economic cooperation entity and by enhancing Asian financial integration to diversify the traditional economic bases. Further, instead of bailing out irresponsible creditors at the expense of tax payers, a moral hazard, bailing in of in-prudent lenders can release more credits during times of financial crisis, which has the added virtue of reducing moral hazards.

2. LITERATURE REVIEW

2.1. The 1997-1998 Asian Financial Crisis

With low inflation, high domestic saving and driven by a thriving export sector, many Asian countries achieved impressive economic growth before the onset of the Asian financial crisis 1997-1998. This conducive macroeconomic scenario attracted large foreign capital inflows into the Asian financial systems, creating a key environment for fostering the ensuing financial crisis when the capital flows reversed direction. The financial crisis erupted when an abrupt and enormous capital outflows caused a sharp depreciation of the local currencies, devastating the financial systems in the Asian developing countries. Amidst financial market liberalization within Asia, regulatory inadequacies, close links between public and privileged private institutions, coupled with the pervasive moral hazard problem in Asia magnified the financial vulnerability of the region. Personal nepotism and political favoritism, together with the implicit assurance that governments would be willing to intervene in case of a debt issue in favor of any troubled firm, had induced markets to operate under the impression that the return on investment was "risk free" against any adverse shocks (Corsetti et al., 1999). Such misguided beliefs underpinned a sustained asset accumulation and balance sheet implosions, resulting in persistent and large current account deficits. In Korea, 20 of the largest 30 conglomerates had in 1996 a return on invested capital that was below the cost of capital, setting the stage for an ever growing share of non-performing loans in the banks' balance sheets.

The moral hazard problem in Asia had encouraged the leading national banks to borrow excessively from abroad mostly in USD and to lend aggressively at home in local currency. This is a recipe for financial crisis in the event of currency depreciation. In particular, many Korean banks had extremely high borrowing in foreign currency and had aggressive lending to domestic *chaebols* in local currency Won. This laid the foundation for extreme banking shock when the Won depreciated sharply against the USD. The ratio of short-term external liabilities to foreign reserves was well above 100% in Korea, Indonesia and Thailand. In 1997, the sharp drop of the highly speculative real estate and wildly volatile equity markets fuelled by foreign capital-led to the emergence of big losses and defaults in the corporate and financial sectors in Malaysia. From mid-1997 onward, rapid reversals of capital flows, precipitated by fear and speculation, led to the inevitable collapse of regional currencies. The two countries with the largest and most persistent current account imbalances were Thailand and Malaysia, both of which experienced deficits for over a decade. By early 1997, macroeconomic conditions had seriously deteriorated in most of the region. At the heart of the financial crisis in Malaysia were the real estate and equity bubbles that burst abruptly. Led by US fund managers, foreign investors started a sustained and aggressive selling of their stocks, vastly depressing equity values. By 15 May 1997 the KLCI had fallen to a 16 months low, an unprecedented decline unseen before. Valuation losses arising from large borrowing by banks and corporations, compounded by depreciation of the local currency, resulted in bankruptcy of some financial institutions. The economic weakness in Japan contributed additional damage by a much reduced demand for imports to Japan from the region. Ironically, the International Monetary Fund (IMF) introduced the wrong recipe for financial rehabilitation by imposing high interest rates, with the misguided goal of limiting further currency depreciation. This absurd policy had extreme repercussions on the economies and financial fundamentals of the Asian countries, resulting in more insolvency. Damaged by the 1980s asset bubbles and further weakened by a persistently stagnant economy in the 1990s, Japan resorted to heavy lending to Asian economies, hoping to gain from higher returns. Given the very low interest rates in Japan and stimulated by the higher returns available outside Japan, Japanese banks made large scale lending to the fast-growing East Asian countries. As the Japanese crisis deepened further in 1997, many of these banks suffered sizable capital losses and were required to re-balance their loan portfolio in adherence to capital adequacy standards. This perfect storm aggravated the financial weakness of Asian economies. Further, the highly interdependent economies in Asia were now subject to the rapid contagious transmission of financial panic across the entire region. Within this scenario, a delay in controlling a local crisis through the appropriate program of international assistance and financial rehabilitation, coupled with the failure to promptly restore market confidence, had greatly amplified the scale of the Asian financial crisis, for which the IMF was partly responsible.

2.2. The 2007-2008 US Subprime Mortgage Crisis

Sharp and persistent Asian currency devaluation during the Asian financial crisis 1997-1998 had led to a vast increase in debt obligations denominated mostly in USD. This overbearing un-hedged foreign debt obligation, not adequately covered by foreign reserves, and compounded by vastly reduced economic output gave rise to the most severe global financial crisis that prompted the largest financial rehabilitations in history. This painful episode had induced developing Asian countries to build up their foreign reserves, mostly in the US Treasury bills, to provide protection against future crisis of similar origin. With a consistent and sustained current account surplus post crisis within Asia and driven by growing exports, the global trade imbalance gradually built up the foundation for the next financial crisis that would be triggered in the US beginning in mid-2007. The trade surplus in Asia and the accompanying capital outflows channeled excess funds from Asia to advanced economies, particularly to the US Treasury bills, leading to increased asset valuations in the US and a concomitant lowering in yields and hence lowering borrowing costs. Low yields and low returns in the US compelled financial institutes and insurance companies to seek higher returns within the US by devising complicated and complex financial instruments such as the MBS that obscured and distorted systemic risk. Low

borrowing costs encouraged risky investments. Further, the moral hazard promoted a toxic environment that drove the speculative housing market explosive growth in 2001-2006. These devils of moral hazards are the root cause of the so-called subprime mortgage crisis that began to raise its ugly head as early as mid-2006 with a sharp spike in mortgage delinquency. This subprime mortgage crisis quickly evolved into the 2007-2008 great recession in the US through a web of complicated financial instruments such as MBS and CDS.

2.3. Ongoing Global Recession

Mediated by the MSB and CDS, the mid-2006 subprime mortgage crisis triggered a credit crisis in July 2007 in the US, following the collapse of two Bear Stearns hedge funds. This credit crisis quickly spread to almost every country and brought the global financial system to an instant halt. To give a perspective on the scale of this credit crisis, we use the so called TED spread as a guide. The Treasury bill yields over the Eurodollar spread is known as the TED spread. It is the difference between the 3 months US Treasury bill yield and London Interbank Offered Rate. The TED spread is an indicator of perceived credit risk in the credit market (Kenc and Dibooglu, 2010; Alamer, 2015). Beginning mid-2007, the TED spread started to increase dramatically, as investors flee to the safety of the short-term US Treasury bills. Within a short time it peaked at a record high of 463 basis points on October 10, 2008. To provide adequate liquidity to the financial systems at the peak of the credit crisis, a massive injection of liquidity into the financial systems by central banks reversed the up-trend of TED spread. As of early July 2009, the TED spread was reduced to 35 basis points, which is slightly above historical norms.

3. METHODOLOGY AND ANALYSIS

The brief narrative provides both the timeline and the financial scale of the great recession in the US. To gain more insights into the scale and cause of this great recession, it is necessary to look into the details of CDS market.

3.1. CDS

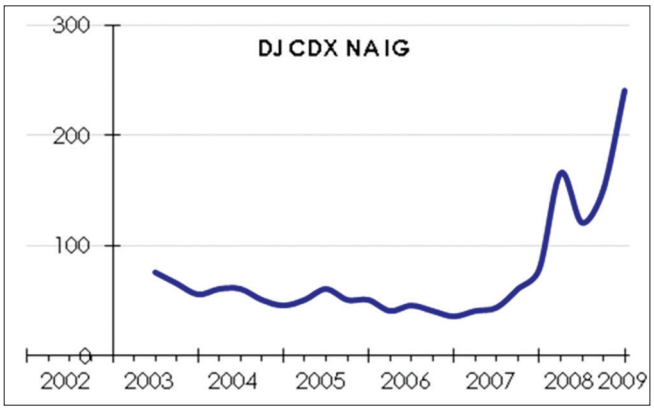
The CDS is a widely traded credit derivative, functioning as insurance for a bondholder against default. It allows investors to buy protection against a risk of default by a reference corporate or a sovereign entity. CDS spreads are the annual cost, expressed in basis points, against the face value of the bond. A basis point is equivalent to an annual payment of USD 1000 (over four quarterly instalments) for the purchase of a USD 10 million CDS contract. It is also equivalent to an annual 0.01% interest payment. The CDS market has the tendency to lower the costs and increase the liquidity in the bond market. However, at the peak of the financial crisis, the CDS market contributed to higher spreads in the bond market. Given that the CDS market plays the role of shock amplifier during a crisis, much discussion have focused on how to reduce systemic risk stemming from the widespread use of CDS contracts traded in the over-the-counter market (Shim and Zhu, 2014).

CDS spreads are directly related to global risk premium and hence to capital flows. Seen in this light, the emerging markets were somewhat insulated from the initial stage of the subprime mortgage crisis before the onset of the Lehman shock on 15 September 2008. However, the subsequently deteriorating US financial systemic risk following the Lehman crisis quickly spread the contagion around the world, inducing large spikes in CDS spreads globally and triggering the global great recession. Figure 1 shows the time series of DJ CDS indices in basis points from 2003 to 2009, indicating sharp increases beginning from mid-2007. The contraction of world trade after the Lehman collapse was remarkable, both for its severity and for its uniformity across developed and emerging markets (Dooley and Hutchison, 2009). The CDS spreads directly reflect the market's assessment of an entity's (corporate or sovereign) credit risk. Post Lehman shock, the CDS spreads of the top US banks increased almost a hundred fold on average, leading to a large upward spike in CDS spreads overall, reflecting the depth of the crisis (Wang and Moore, 2002). But how did the CDS spreads suddenly widened across the globe in such a terrifying manner? The next section will discuss the role of financial contagion that spreads the "disease of fear" via instantaneous and spontaneous aversion to risks.

3.2. The Contagion of Fear

It is worth noting that the N-year CDS spreads should be theoretically close to the excess of the yield on an N-year bond over the risk-free rate, since a portfolio consisting of a CDS and a bond with a given degree of risk is very similar to a risk-free bond (Hull et al., 2004). Recent CDS on Malaysian sovereign 5 years bonds, for example, has been traded around 250 basis points. Given that the government bond was initially contracted at around 450 basis points, this would imply that the bond price could possibly be traded round 700 basis points theoretically, a level that implies junk bond status. This theoretical implication is valid if the CDS and bonds were actively traded with high liquidity to justify market efficiency assumption. In any case, CDS of 250 basis points is a reflection of market risk aversion to Malaysian sovereign bonds. There is a reason for this aversion. Financial markets impart disincentive to a lack of fiscal transparency and accountability. For example, exposure of unexpected levels of fiscal opacity contributed to the large spikes in Greek government bond yields and triggered the subsequent Greek sovereign debt crisis. A study using a broad sample of 5 years sovereign CDS spreads over the

Figure 1: Credit default swaps (CDS) indices in basis points. CDS indices are equal-weighted averages of the spreads on the underlying 5 years CDS contracts



period from 2004 to 2010, had concluded that the sovereign credit markets do in fact differentiate countries with different levels of fiscal opacity (Peat et al., 2014), where fiscal opacity is measured by the open budget index published by the International Budget Partnership. Hence, there have been renewed efforts to promote fiscal transparency in an effort to promote financial stability.

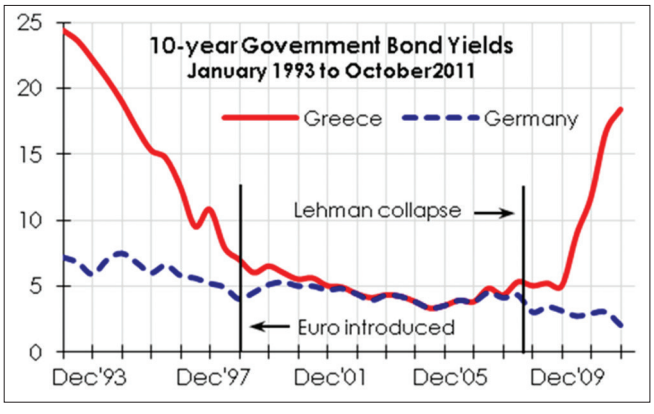
3.3. Financial Contagion: The Role of CDS

In a region where direct exposures to problematic mortgages in the US were minimal during the 2007-2008 subprime crisis, credit spreads for major borrowers in Asia widened even more than they did in Europe and the United States. This is an anomaly that begs a logical explanation. The contagion beginning 2008 was part of an amplification mechanism driven by valuation losses caused by the bursting of a global credit bubble, following the collapse of the Lehman Brothers. The valuation losses were not caused by a reassessment of credit risks (expected default frequency). The losses were indeed the consequence of an instantaneous global re-pricing of these risks. Credit spreads rose sharply after mid-2007 (Figure 1 for DJ CDS indices) because default risk premium was driven by a global risk factor, which acted as the source of contagion. Credit spread for Asian borrowers were driven in large part by co-movements in global risk aversion and in a smaller part by changes in global default risk. Total issuance in the subprime debt market during 2006-2007 amounted to merely $1 trillion. This is relatively small compared to the total quantum of US mortgage debt of about $11 trillion. How did a small mortgage problem evolve to become a terrifying monster? The crisis became so big because the underlying CDS bubble, estimating at 60-100 trillion USD, was immensely big. For example, a 10% loss would amount to a 6-10 trillion USD loss, a quantum of loss that was beyond the capacity of the banking systems to adsorb. From the start of the crisis in August 2007 to its peak in November 2008, credit spreads for the 125 US investment-grade borrowers included in the DJ CDX IG index rose by an average of over 170 basis points. The implied (but not realized) valuation losses during the crisis would total $4.1 trillion, a large sum indeed. Hence valuation losses on credit instruments were massive, dwarfing real losses from actual defaults. Valuation losses were merely paper losses that were not yet monetized. A modeling study concluded that on average the risk premium accounted for 85% of the CDS spread while the expected default loss accounted for merely 15% (Kim et al., 2010). Risk aversion is the most important driver of risk premium and the most important determinant of credit spreads. These risk aversions and the ensuing valuation losses played a critical role in the amplification of the crisis. The valuation losses froze up the flow of credit, exposing banks to immense financial stresses. With a total market value of USD 60-100 trillion, the underlying CDS bubble was indeed so large that global risk aversion quickly became the major source of financial contagion. The US sub-prime mortgage crisis was merely the trigger of the contagious CDS crisis transmitted by fear. When a bubble bursts, it bursts because global risk aversion suddenly jumps precipitously. This global risk aversion triggered a severe credit crunch, and caused a sharp economic down turn, which continue to drag down global economic growth until today. The 2007-2008 financial crisis has been closely associated with the dysfunctions in the financial systems of the advanced economies. A sustained global recovery cannot be maintained unless the rehabilitation of financial systems can take root, in the US and in the euro zone. This involves access to liquidity for financial institutions, rehabilitation of distressed assets, and re-capitalization of weak but viable institutions (Zhang and Zhang, 2011). A successful banking rehabilitation and financial reform would ensure that credit-market conditions return to their pre-crisis state i.e., credit spreads return to their average pre-crisis levels and credit are readily available.

3.4. EU Financial Crisis: The Cost of Opacity

Benefitting from lower bond yields and lower borrowing costs after it joined the euro, the Greek government adopted non-transparent budget deficits, and ended in a debt crisis in 2010. Soon the debt crisis spread to other peripheral countries in EU, posing severe threat to France and Germany banking systems that extended large loans to these peripheral nations in the EU zone. Figure 2 shows the mean 10 years government bond yields for Greece and Germany from January 1993 to October 2011. The period between 2000 and 2006 may be viewed as the "honeymoon" for the EU, during which time the EU experienced a remarkable decline in the pricing of credit risk. This honeymoon bliss turned out to be a precursor for the impeding turbulences heading towards the global financial crisis of 2008-2009, when Greek government bonds spiked abruptly, as may be seen from Figure 2. High spreads were also prevailing throughout the EU peripheral countries during this global crisis period (not shown), especially during the 2010 EU sovereign debt crisis that swept over the periphery area. The EU sovereign debt crisis escalated during 2010 in several European countries, and culminated in the selective default on Greek sovereign debt in early 2012. One plausible interpretation of these high spreads in 2010 is that the CDS market was pricing default risk not primarily on current fiscal and macroeconomic fundamentals but rather on future scenarios. The market was then expecting and hence pricing in a severe future deterioration in fiscal and macroeconomic fundamentals in the periphery area (Greece, Ireland, Italy, Portugal, and Spain). This interpretation is acceptable as it is consistent with the subsequent selective default on Greek sovereign bonds in early 2012. This high CDS premium in late 2010 during the Eurozone debt crisis is in part attributable to a decline in the appetite for credit-risky instruments and concomitant falling market liquidity, especially in the periphery area (Aizenman et al., 2013). As contagious honeymoon optimism

Figure 2: Mean 10 years government bond yields for Greece and Germany from January 1993 to October 2011



prevailed, much divorced from fundamentals, sovereign risk was underpriced during the period of 2000-2006. However, the honeymoon euphoria gave in quickly to pervasive and pessimistic contagion of fear heading into 2010 and beyond. Sovereign debt crises in peripheral area of EU had different origins. Acting as guarantor for all creditors of the major Irish banks, the Irish government had to pay a large price when defaults occurred. As commented earlier, the Greek government, adopting opaque budget deficits, ended in a debt crisis in 2010. Other Eurozone periphery countries that had been borrowing heavily on the basis of low interest rates, regardless of their respective high default risks, soon were confronted with similar debt crisis. The EU monetary union was now in a serious conundrum, with Germany and France having given large loans to these periphery nations that might default anytime soon. In short, EU was in a crumbling financial crisis (Pomfret, 2014).

4. RESULTS AND DISCUSSION

4.1. Vulnerability of Emerging Market Economies (EME)

EME are highly vulnerable to external shocks. Figure 3 demonstrates the co-movements in MSCI emerging markets and S&P 500 for the period 1 January 2005 to 15 August 2005, with significant correlation of $R^2 = 0.4073$ (Figure 4). Foreign capital flows have proven to be an important determinant of booms and busts in EME. The US systemic financial shocks (USSFS) are an important driver of economic dysfunctions and wild financial fluctuations in EME. A typical emerging market real economy experiences negative effects stronger than the US real economy itself during a USSFS (Fink and Schüler, 2015). An adverse shock to the US financial system dries up capital flows from the US to the EME. The decline in cross-border lending results in tighter financing conditions for the EME. Capital inflow reversals generate immense pressure on the currency of the EME such that the exchange rate depreciates sharply. The transmission of USSFS can occur through direct international trade or indirect financial linkages. A study had been conducted to examine the transmission of the 2008 US crisis to financial markets in five emerging Asian economies: Indonesia, Korea, the Philippines, Thailand, and Taiwan. The study utilized the multivariate generalized autoregressive conditional heteroscedasticity models. Emerging Asian countries are quite vulnerable to external shocks and can experience a sudden acceleration of systemic risk through deteriorations in both the capital and the foreign exchange markets, the study concluded (Kim et al., 2015).

4.2. Financial Crisis Management: Lessons Learned

The dramatic 1997-1998 Asian crisis took many, including the IMF, by surprise. It was rooted in two basic flaws: The poor macroeconomic fundamentals of affected Asian economies prior to the crisis and the volatile capital outflows once the crisis was triggered. A critical flaw in the macroeconomic fundamentals and structural problems in these Asian economies then was rooted in the ills of moral hazards. Bank, both national and international, lent without serious scrutiny, neither on borrowers' credit worthiness nor on the viability of their economic activities

Figure 3: Equity performance year-to-date for MSCI emerging markets and S&P 500

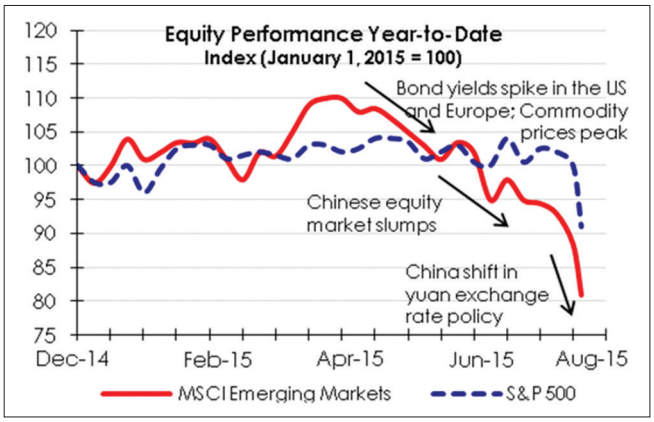
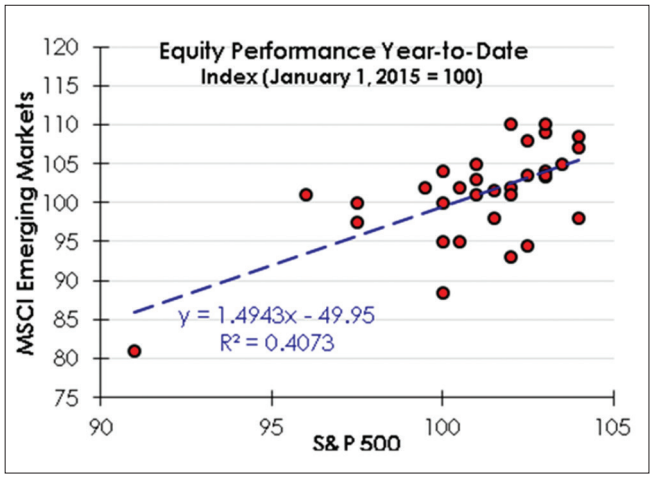


Figure 4: Linear regression of equity performance year-to-date for MSCI emerging markets versus S&P 500



supported by the loans. The banks relied on the international credit rating agencies, notably Standard and Poor's and Moody's, for assessment of credit worthiness. As the events unfolded, these credit ratings did not reflect the real ability of the debtors to repay debts. The covert and opaque dealings among government officials, politicians, bankers, and businesses built up massive unhedged foreign currency debts in the balance sheets of banks and corporations. Most Korean *chaebols* carried debt to equity ratios exceeding 400%, which is beyond their ability to service the debt obligations. Mismatch between maturations of short-term debts and available reserves or resources triggered massive illiquidity, which quickly turned into overwhelming insolvency in the face of adverse currency movements. Some advice might be helpful. Imposing losses on those imprudent lenders by bailing in of creditors would help to free up some debts and reduce future moral hazards. Forgiving of debt appeared inevitable and morally justifiable, yet it was not a part of the IMF-funded restoration program for Indonesia, Korea and Thailand. The IMF should deal with the urgent and immediate crisis of the financial systems by restoring confidence and by injection of adequate funds to recapitalize viable banks. Fiscal restructuring and macroeconomic reform should only be implemented after the frail financial systems were firmly on the way to recover. The extreme money tightening and high interest rates imposed by the IMF went too

far as to trigger more insolvency of banks and corporations and to further undermine-not restore-confidence. This tightening measure was counterproductive to well-intended exchange rate movements, and was damaging the real economy, precipitating more nonperforming loans and inducing self-reinforcing debt runs, as well as deepening the contraction in domestic demand. The structural reforms mandated by the IMF became a distraction, although they were meant to build resilience and pave the path to long-term growth. Over optimism on the part of IMF regarding projected recovery systematically erred on the high side, creating a false sense of security.

4.3. Banks have Insufficient Capital

Asian emerging economies at the time of crisis had similar problems faced by the former Soviet Union and Eastern Europe in their transitions to market economies. First, their immaturity with global financial intricacies exposed these Asian countries' vulnerability to panic and speculative attack. Second, the poor performance of the Japanese economy in the 1990s caused Asian countries to experience a sharp reduction in the demand for their exports. Third, unhedged foreign currency denominated loans quickly exposed the banks to extreme stress when subject to currency devaluation. However, at the center of this storm is the moral hazard created by perceived government guarantees of bank deposits and other financial institution liabilities. Government "guaranteed" bank deposits provided a cheap source of funds. Because of these cheap governments subsidized deposits, bank owners had an incentive to operate with as little of their own capital as possible, and to lend to risky projects to get better returns. As a result of these moral hazard problems, banks are very highly geared and highly exposed to bad loans when economic conditions took a bad turn as they did. The high gearing of 4.0 and high exposure to bad related-party loans in the Korean *chaebol* has been widely cited as a contributory factor in the Korean crisis. A small trigger can precipitate self-fulfilling expectations of corporate insolvency and bank bankruptcy, leading to bank runs. A small deterioration in loan quality or a small increase in the cost of servicing liabilities can make banks and corporations insolvent. As cash reserves are a small fraction of assets, a small run on deposits can quickly make them illiquid. And illiquidity can quickly cause insolvency. In such circumstances, any adverse shock can precipitate a financial crisis that soon became systemic. Up until then, the Basel capital accord recommended that central banks should require the capital of every bank to be at least 8% of its risk-weighted assets. This would imply a maximum debt-to-equity ratio allowed by the Basel accord to be 11.5 (that is, 92/8). The high debt to equity ratio exposed banks to danger of insolvency from even small shocks. To make bank safe, there has been suggestion to increase the Capital Adequacy Ratio from 8% to 16% (Fane and McLeod, 1999), implying a debt to equity ratio of 5.25 (84/16). Further, for these emerging Asian economies, foreign exchange market instability caused by external shocks may lead to a serious dollar liquidity problem even when their economic fundamentals are healthy. Therefore, it is advisable for these countries to have institutional arrangements to enhance international cooperation such as currency swap agreements. This is the subject of deliberation in the concluding section, in the context of an emerging China as a major economic power.

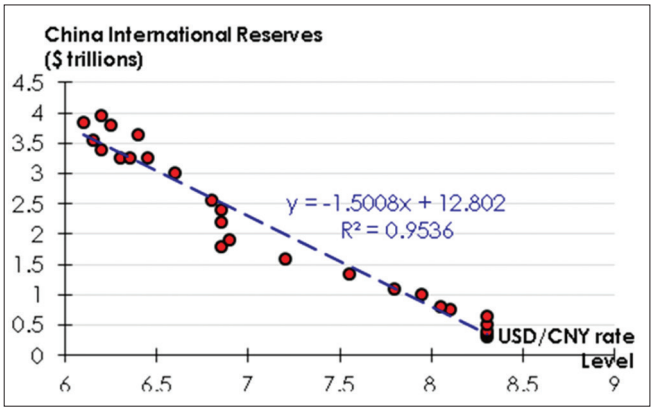
5. CONCLUSION: THE WAY FORWARD

The emergence of China as a regional economic power coupled with the size and dynamism of its economic activity have played the dominant role in linking equity markets across the region. Figure 5 depicts China's consistently growing foreign reserves and constantly improving exchange rates in relation to the USD. The positive co-movement of China's foreign reserves and exchange rates is strongly correlated with $R^2 = 0.9536$ (Figure 6). Improving foreign reserves and favorable exchange rates will give China the space to vie for the Renminbi to become a foreign exchange reserve in its own right. The 2008 crisis has further increased investors' awareness and confidence of China as a source and destination of equity finance. China substantial trade linkages, significant foreign direct investment flows, and strong interconnections in international business relationships have further strengthened China's role in integrating the economies in East Asia. Figure 3 illustrates the transmission of changes in equity prices and exchange rates in China to those in the Emerging Economies. Growing global uncertainty and strengthening global economic linkages will continue to enhance the important role of China in transmitting equity price changes abroad (Glick and Hutchison, 2013). The ongoing crisis serves as a potent catalyst that would trigger a collective determination within East Asia to find a common long-term vision for a stable and viable Asian Economic Union.

Regional integration is now much stronger than global integration in the Asian financial markets. Regional convergence continues

Figure 5: China international reserves and USD/CNY

Figure 6: Linear regression of China international reserves vs. USD/CNY



to persist in the post 2008 crisis whilst Asia-global convergence is no longer so strong. Events in 2008 have reversed Asian financial market's integration from a global market to become a more regional one. Regional convergence would be relatively stronger in financial markets where interest rates are of longer maturity as these rates are more prone to be influenced by economic fundamentals. Given the uncertainty and volatility unleashed by the global financial crisis, the Asian countries have turned to greater regional cooperation and integration (Rughoo and You, 2015). The need is particularly strong and urgent for Asian markets to further develop their domestic and regional financial and capital markets. Asian nations are beginning to realize that they can collectedly achieve more of their common goals by acting together rather than by going their separate ways. There are painful and lingering memories of the past that must be honestly resolved. Beijing and Tokyo should settle past historical issues and prepare themselves for the day when both will jointly carry the mantle of leadership in the region. There has been some thesis that surmises that the American economy may soon pick up the malaise of the EU debacles, and with a vengeance. The long-term prospect of the American economy makes it incumbent upon Asian nations to plan for the day when the US is no longer the first among equals. This is the time to act. Beijing and Tokyo must engage deeply in the task (Tourk, 2004). The East Asian economies have achieved strong economic interdependence, through domestic structural reforms, external liberalization, and market-driven integration with the global economies. Given the ongoing currency turmoil confronting the region, the regional economies should immediately begin a process of promoting exchange rate stability. This is a crucial component towards an enhanced and timely surveillance process to avoid or reduce future currency crisis. An important task is to introduce a new G-4 currency basket arrangement, the sooner the better, based on the Chinese Renminbi, the Japanese yen, the US dollar and the Euro to service the trades among the emerging East Asian economies. Further, East Asian Economic Community (EAEC) should seriously contemplate on the possibility of an economic and monetary union with possibly a single currency. The mistakes of the EU would serve as guidelines for the EAEC. China and Japan must assume joint leadership toward this vision of the EAEC (Kawai, 2005). Japan should begin to consider itself as a member of the Asian Infrastructure Investment Bank and as an integral component of the modern maritime Silk Road, popularly known as the One Belt One Road Initiative. As a start, Japan should demonstrate a clear conviction of remorse for the atrocity inflicted on its neighbors during the Second World War. A closure to this unfortunate chapter in the history of modern Asia would open the window to common aspirations for peace and prosperity.

6. ACKNOWLEDGMENT

Financial support provided by research grant #305/PMATHS/613418 is gratefully acknowledged.

REFERENCES

Alamer, A.R.A., Salamon, H.B., Qureshi, M.I., Rasli, A.M. (2015), CSR's measuring corporate social responsibility practice in Islamic banking: A review. International Journal of Economics and Financial Issues, 5(1S), 198-206.

Aizenman, J., Hutchison, M., Jinjarak, Y. (2013), What is the risk of European sovereign debt defaults? Fiscal space, CDS spreads and market pricing of risk. Journal of International Money and Finance, 34, 37-59.

Corsetti, G., Pesenti, P., Roubini, N. (1999), What caused the Asian currency and financial crisis? Japan and the World Economy, 11, 305-373.

Dooley, M., Hutchison, M. (2009), Transmission of the U.S. subprime crisis to emerging markets: Evidence on the decoupling - Recoupling hypothesis. Journal of International Money and Finance, 28, 1131-1149.

Fane, G., McLeod, R.H. (1999), Lessons for monetary and banking policies from the 1997-98 economic crises in Indonesia and Thailand. Journal of Asian Economics, 10, 395-413.

Fink, F., Schüler, Y.S. (2015), The transmission of US systemic financial stress: Evidence for emerging market economies. Journal of International Money and Finance, 55, 6-26.

Glick, R., Hutchison, M. (2013), China's financial linkages with Asia and the global financial crisis. Journal of International Money and Finance, 39, 186-206.

Hull, J., Predescu, M., White, A. (2004), The relationship between credit default swap spreads, bond yields, and credit rating announcements. Journal of Banking and Finance, 28, 2789-2811.

Kawai, M. (2005), East Asian economic regionalism: Progress and challenges. Journal of Asian Economics, 16, 29-55.

Kenc, T., Dibooglu, S. (2010), The 2007-2009 financial crisis, global imbalances and capital flows: Implications for reform. Economic Systems, 34, 3-21.

Kim, B.H., Kim, H., Lee, B.S. (2015), Spillover effects of the U.S. financial crisis on financial markets in emerging Asian countries. International Review of Economics and Finance, 39, 192-210.

Kim, D.H., Loretan, M., Remolona, E.M. (2010), Contagion and risk Premia in the amplification of crisis: Evidence from Asian names in the global CDS market. Journal of Asian Economics, 21, 314-326.

Peat, M., Svec, J., Wang, J. (2014), The effects of fiscal opacity on sovereign credit spreads. Emerging Markets Review, 24, 34-45.

Pomfret, R. (2014), European crises and the Asian economies. Journal of Asian Economics, 31-32, 71-81.

Rughoo, A., You, K.F. (2015), Asian financial integration: Global or regional? Evidence from money and bond markets. International Review of Financial Analysis, [In Press].

Shim, I., Zhu, H. (2014), The impact of CDS trading on the bond market: Evidence from Asia. Journal of Banking and Finance, 40, 460-475.

Tourk, K. (2004), The political economy of east Asian economic integration. Journal of Asian Economics, 15, 843-888.

Wang, P., Moore, T. (2002), The integration of the credit default swap markets during the US subprime crisis: Dynamic correlation analysis. Journal of International Financial Markets, Institutions and Money, 22, 1-15.

Zhang, Z., Zhang, W. (2011), The road to recovery: Fiscal stimulus, financial sector rehabilitation, and potential risks ahead. Journal of Asian Economics, 22, 311-321.