# FINANCIAL CRISIS AND RISK MANAGEMENT: REASSESSING THE ASIAN FINANCIAL CRISIS IN LIGHT OF THE AMERICAN FINANCIAL CRISIS*

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## I. Introduction

As the current global financial crisis recedes and governments contemplate their disengagement from the financial systems, it is useful to study whether the lessons from the earlier Asian financial crisis, especially those with regard to risk management, played a role in confronting the current crisis, and to examine how the Asian countries have faired since their crisis in 1997. The global financial crisis of 2007-09, which began as a credit crisis in the United States and spread to Europe and beyond, is considered the most serious global economic crisis since the 1930s and has invoked unprecedented responses by various governments and institutions around the world.[1] The outbreak of the current crisis is widely attributed to excessive leveraging and risk mismanagement by U.S. financial institutions in a low interest-rate environment, and lax credit regulation that prevailed during the past decades.[2] Interconnections of financial institutions and financial globalization are blamed for the rapid spread of the crisis worldwide.[3]

When the financial crisis started to have a real bite on the real economy, the Federal Reserve's initial policy response of liquidity provision was subsequently supplemented by fiscal stimulus measures.[4] Despite these measures, however, the adverse real and financial impacts of the crisis on the United States and other developed countries have been extensive.[5] In contrast, the impacts of the crisis on emerging markets (EM) have been less severe.[6] Nonetheless, the ensuing global recession influences emerging markets due to a global contraction in the demand for commodities and a global curtailment in the sources of credit and financial flows.[7]

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[1] *See generally* Ingo Fender & Jacob Gyntelberg, *Overview: Global Financial Crisis Spurs Unprecedented Policy Actions,* BIS Q. REV., Dec. 2008, at 13-24 (discussing financial policies implemented by various countries in response to the global market developments in 2008).
[2] *See, e.g.*, INT'L MONETARY FUND, GLOBAL FINANCIAL STABILITY REPORT: RESPONDING TO THE FINANCIAL CRISIS AND MEASURING SYSTEMIC RISKS, WORLD ECONOMIC AND FINANCIAL SURVEYS, APRIL 2009 [*hereinafter* GFSR].
[3] *Id* at 74.
[4] *See* Timothy F. Geithner et al., Press Release, U.S. Dept. of Treasury, Financial Stability Plan (Feb. 10, 2009), *available at* http://www.treasury.gov/press/releases/tg21.htm (announcing measures taken to restore confidence in the strength of U.S. financial institutions and to restart credit issuance); Ben S. Bernanke, Chairman, Board of Governors of the Federal Reserve System, Stamp Lecture at the London School of Economics: The Crisis and the Policy Response (Jan. 13, 2009) (transcript available at http://www2.lse.ac.uk/publicEvents/pdf/20090113_Bernanke.pdf) (discussing the Federal Reserve's policy responses to the financial crisis).
[5] *See* Bernanke, *supra* note 4.
[6] *See* Jongmoo Jay Choi & Michael G. Papaioannou, *Credit, Currency, or Derivatives: Instruments of Global Financial Stability or Crisis?*, 2009 INT'L FIN. REV. 10, at 10-16.
[7] *See* Geithner, *supra* note 4; Bernanke, *supra* note 4.

A distinguishing feature of the current crisis is the immediate priority placed on achieving an adequate recovery of economies and institutions affected by the crisis, with a lesser consideration for fiscal solvency.[8] In contrast to the centralized policy implementations utilized during the Asian financial crisis, the policy responses in the United States have been more decentralized by involving many regulatory institutions and focusing on the rescue of large systemic institutions.[9] On the other hand, the current U.S. responses are more wide-reaching than the traditional monetary policy tools adopted in previous crises, and may be necessary to provide liquidity to a greater diversity of firms and institutions, and to facilitate broader market stability and macroeconomic recovery.[10]

This article compares the causes and policy responses between the current financial crisis in the United States and other developed countries with those of the Asian financial crisis, which originated in an emerging market. Both the U.S. and Asian crises are similar in that their financial institutions were the initial depository of shocks due to their mismanagement of credits and risks. As we note in Parts II and III, however, the two crises differ in their deeper underpinnings — regulatory deficiencies underpinned the current U.S. financial crisis while the Asian financial crisis in 1997-98 could be attributed to macrofinancial shortcomings. We also discuss the major differences in policy objectives — the U.S. governmental policies emphasized liquidity and economic stimulus while the policies during the Asian financial crisis were geared towards restoring international investor confidence through tight monetary and fiscal policies. Parts IV and V discuss the implications of these different policy perspectives and draw lessons for risk management and regulation in order to prevent and/or better manage future financial crises.

## II. CAUSES AND RESPONSES TO THE ASIAN FINANCIAL CRISIS

The Asian financial crisis of 1997-98 jolted the Asian EM countries like no other economic event since World War II. It began with an attack on the Thai Baht in July 1997 that quickly consumed the entire country, spreading throughout Asia, and precipitating beyond.[11] The effect of the crisis was both deep and broad — countries accustomed to decades of 8-10% positive annual real economic growth saw their growth plunge to negative 15%.[12] As a result, hundreds of firms and factories closed their shops and millions of people lost their

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[8] *See* Geithner, *supra* note 4; Bernanke, *supra* note 4.

[9] The U.S. Treasury, the Federal Reserve, the Federal Deposit Insurance Corporation, and other financial agencies are involved in the effort to strengthen the U.S. financial system. Four main types of measures were undertaken: (i) government guarantees on bank deposits and other bank liabilities, (ii) provisions of liquidity support, (iii) capital injections and interventions in financial institutions, and (iv) restructuring and distress asset resolution of financial institutions. *See* GFSR *supra* note 2; Geithner, *supra* note 4; Bernanke, *supra* note 4.

[10] *See* Bernanke, *supra* note 4.

[11] Jongmoo Jay Choi, *The Asian Financial Crisis: Moral Hazard in More Ways Than One,* 2000 INT'L FIN. REV. 3, at 4.

[12] *Id.* at 3.

jobs.[13] Stock prices, as well as currency values, plunged to half their values within days after the crisis.[14]

The crisis was both unpredictable and painful, in part because the Asian government officials failed to understand why their economies could not weather the problems, given the past trend of continued high growth and economic success.[15] The past economic success, however, led to their over-confidence and complacency and resulted in sheer blindness to the events unfolding across the world.[16] Because they failed to account for these global events, the Asian governments were unable to innovate and adapt to the globalization and development occurring across the world.[17]

The Asian financial crisis initially started as a currency crisis—slowdowns in economic growth reversed capital inflows, and many Asian currencies given their high current account deficits and overvaluation came under speculative attack.[18] However, the currency crisis had deeper reasons: (i) structural problems of domestic financial and corporate systems that depended on leverage and large inflows of external borrowings; (ii) mismanagement of macro financial risk such as exchange rates and international reserves; and (iii) poor corporate governance and inadequate regulations.[19] A combination of inadequate domestic financial capabilities, inadequate assessment and management of financial risk, and the maintenance of relatively fixed exchange rates led banks and corporations to borrow large amounts of international capital.[20] Most of the borrowed capital was short-term, unhedged, and in various foreign-currency denominations.[21] Foreign capital inflows continued over time to finance sub-par investments.[22] These private sector investment and financing decisions further fueled the crisis, after the lack of confidence by foreign investors triggered a speculative attack and brought about massive currency devaluations.[23] In addition, the government's mismanagement and failure to address macrofinancial and governance issues—i.e., arbitrary government involvement in the private sector, lack of transparency in corporate and fiscal accounting, and governmental mismanagement of the economy—worsened the crisis.[24]

With the guidance from the I.M.F., the governments' immediate responses were to tighten their fiscal and monetary policies with the aim of restoring the confidence of international

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[13] *Id.* at 3-4.
[14] *Id.* at 4.
[15] *Id.* at 5.
[16] *Id.*
[17] *Id.*
[18] *See* Graciela L. Kaminsky & Sergio L. Schmukler, *What Triggers Market Jitters? A Chronicle of the Asian Crisis*, 18 J. INT'L MONEY & FIN. 537 (1999); Sheryl WuDunn & Nicholas D. Kristof, *Japan, Economic Power Aside, Seems Paralyzed by Asia Crisis*, N.Y. TIMES, Dec. 17, 1997, at A1.
[19] *See* Kaminsky & Schmukler, *supra* note 18.
[20] *Id.* at 6.
[21] *Id.* at 26.
[22] *Id.*
[23] *Id.*
[24] *Id.*

investors. In addition, they engaged in (i) corporate restructurings and reforms by inducing improvement in corporate capital structure and corporate governance as well as structured corporate closings and bankruptcies; (ii) consolidation of the financial service industry by interim government takeover and subsequent sales of ailing banks and financial institutions, coupled with liberalization of capital markets; and (iii) mitigating social impacts through budgetary support via transfer payments and social expenditures over time.[25]

## III. THE ASIAN ECONOMIES SINCE THE CRISIS: PERFORMANCE AND REFORMS

For the most part, the government policy measures were successful and the affected Asian economies started growing at a fast pace shortly after the crisis was over. In fact, several analysts consider the post-crisis recovery of the Asian economies to be the main cause of the emergence and persistence of large current account surpluses across non-China Asia, which are a significant counterpart to the cumulative U.S. current account deficits.[26]

The recovery initially took place in the form of corporate spending reduction, which set the stage for subsequent growth.[27] Some studies have attributed the post-crisis Asian current account surpluses to the reduced corporate expenditure on fixed investment.[28] The lower corporate spending led to diminished aggregate investment rates, widened the savings-investment gap, and allowed the region to become a net exporter of capital.[29] To some extent, this post-crisis reduction in corporate investments reflects an ongoing restructuring necessitated by high leverage and excess investments before the crisis.[30] Given their still conservative corporate investments and aggregate current account surpluses, it would seem that even a decade later, the memory of the crisis still partly defines their investment decisions in a significant way. At the same time, as the restructuring completes its course, it is plausible that investment rates may rise again to contribute to economic growth as well as a reduction in the region's current account surpluses.[31]

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[25] *See* Jacqueline Best, *The Limits of Financial Risk Management: Or, What We Didn't Learn from the Asian Crisis*, 15 NEW POL. ECON. 29 (2010).

[26] *See* Brahima Coulibaly & Jonathan Millar, THE ASIAN FINANCIAL CRISIS, UPHILL FLOW OF CAPITAL, AND GLOBAL IMBALANCE: EVIDENCE FROM A MICRO STUDY, (Board of Governors of the Federal Reserve System International Finance Discussion Paper No. 942, 2008).

[27] *Id.* at 25.

[28] *Id.* at 26**;** Steven B. Kamin, *The Revised Bretton Woods System: Does it Explain Developments in Non-China Developing Asia?* (Feb. 4, 2005) (presented at the Federal Reserve Bank of San Francisco conference, "The Revived Bretton Woods System: A New Paradigm for Asian Development?") *available at* http://www.frbsf.org/economics/conferences/0502/kamin.pdf.

[29] *Id.*

[30] Stijn Claessens, Simeon Djankov & Lixin Xu, *Corporate Performance in the East Asian Financial Crisis*, 15 WORLD BANK RES. OBS. 23 (2009) (founding firm-specific weaknesses in existence before the Asian financial crisis).

[31] *See* Coulibaly and Millar, *supra* note 26.

### A. Key Macroeconomic Parameters for Asian Countries (1995-2007)

To provide a broad perspective on changes that happened since the Asian financial crisis, in Table 1 we present selected macroeconomic statistics for four countries primarily affected by the Asian financial crisis (Korea, Indonesia, Malaysia, and Thailand).

Several general points emerge. It is clear that these Asian countries could not keep with their pre-crisis high real economic growth of 8-9%. However, by 2007, ten years after the crisis, their growth rates have stabilized to 5-6% — still a quite respectable growth rate by a global standard. At the same time, the Asian economies have become more solid financially. Their current accounts have turned positive, and external debt as a percentage of GDP has decreased dramatically. International reserves as a percent of GDP or as a percentage of imports plus external debt have also increased significantly. This shows that the various policies implemented by the Asian governments to address the Asian financial crisis have been generally successful.

On a micro level, Cheung and Jang (2008) provides a score card for corporate governance rules and regulations including disclosure, as viewed by regional experts, fund managers and analysts for nine Asian countries.[32] The results indicate a divergence between the regulatory environment and market perceptions of corporate governance practices in these countries.

**Table 1: Selected Macroeconomic Indicators for Asian Countries (1995-2007)[33]**

| Country | 1995 | 1997 | 1998 | 1999 | 2000 | 2001 | 2005 | 2007 |
|---|---|---|---|---|---|---|---|---|
| **Korea** | | | | | | | | |
| GDP growth rate (real) | 9.2 | 4.7 | -6.9 | 9.5 | 8.5 | 4.0 | 4.0 | 5.1 |
| External debt stock as % of GNI | ... | ... | ... | ... | ... | ... | ... | ... |
| Curr. Acct % of GDP | -1.7 | -1.6 | 11.7 | 5.5 | 2.3 | 1.6 | 1.8 | 0.6 |
| Reserves ($ billions) | 32.8 | 20.5 | 52.1 | 74.1 | 96.3 | 102.9 | 210.6 | 262.5 |
| Reserves % of GDP | 6.3 | 4.0 | 15.1 | 16.6 | 18.0 | 20.4 | 24.9 | 25.0 |
| Reserves % of (Imports + Ext. debt) | ... | ... | ... | ... | ... | ... | ... | ... |
| **Indonesia** | | | | | | | | |
| GDP growth rate (real) | 8.4 | 4.7 | -13.1 | 0.8 | 4.9 | 3.6 | 5.7 | 6.3 |
| External debt stock as % of GNI | 63.4 | 65.1 | 168.2 | 117.1 | 93.6 | 86.6 | 48.8 | 33.9 |
| Curr. Acct % of GDP | -2.9 | -2.1 | 3.9 | 3.7 | 4.8 | 4.3 | 0.1 | 2.4 |

[32] The nine countries examined in the paper are China, Taiwan, Hong Kong, Indonesia, South Korea, Malaysia, the Philippines, Singapore, and Thailand.
[33] For the raw data, *see* International Monetary Fund, International Financial Statistics, http://www.imfstatistics.org/imf/ (last visited June 21, 2010); the numbers herein represent the authors' calculations.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Reserves ($ billions) | 14.9 | 17.5 | 23.6 | 27.3 | 29.4 | 28.1 | 34.7 | 56.9 |
| Reserves % of GDP | 6.7 | 7.3 | 22.4 | 17.7 | 17.8 | 17.5 | 12.1 | 13.2 |
| Reserves % of (Imports + Ext. debt) | 8.0 | 8.4 | 11.5 | 13.3 | 13.9 | 14.5 | 14.5 | 21.1 |
| **Malaysia** | | | | | | | | |
| GDP growth rate (real) | 9.8 | 7.3 | -7.4 | 6.1 | 8.9 | 0.5 | 5.3 | 6.3 |
| External debt stock as % of GNI | 40.6 | 49.8 | 62.1 | 57.0 | 48.6 | 52.4 | 39.5 | 29.4 |
| Curr. Acct % of GDP | -9.6 | -5.8 | 13.0 | 15.7 | 9.0 | 7.9 | 14.5 | 15.5 |
| Reserves ($ billions) | 24.7 | 21.5 | 26.2 | 30.9 | 28.7 | 29.8 | 70.5 | 102.0 |
| Reserves % of GDP | 27.4 | 21.1 | 35.8 | 38.5 | 30.5 | 32.2 | 51.1 | 54.8 |
| Reserves % of (Imports + Ext. debt) | 19.3 | 14.6 | 22.7 | 24.6 | 19.6 | 21.3 | 36.3 | 43.2 |
| **Thailand** | | | | | | | | |
| GDP growth rate (real) | 9.2 | -1.4 | -10.5 | 4.4 | 4.8 | 2.2 | 4.6 | 4.9 |
| External debt stock as % of GNI | 60.6 | 74.6 | 97.2 | 81.3 | 66.0 | 59.7 | 30.6 | 26.5 |
| Curr. Acct % of GDP | -8.1 | -2.0 | 12.7 | 10.1 | 7.6 | 4.4 | -4.3 | 6.4 |
| Reserves ($ billions) | 36.9 | 26.9 | 29.5 | 34.8 | 32.7 | 33.0 | 52.1 | 87.5 |
| Reserves % of GDP | 22.0 | 17.8 | 26.4 | 28.4 | 26.6 | 28.6 | 29.5 | 35.6 |
| Reserves % of (Imports + Ext. debt) | 19.6 | 14.2 | 18.4 | 21.8 | 20.8 | 23.2 | 26.7 | 36.7 |

## B. Restructuring and Reforms in One Asian Country: Korea

In order to appreciate the nature and scope of the specific changes occurred in detail, we have focused on one country (Korea) and have traced the corporate and financial restructurings and regulatory reforms implemented since the Asian financial crisis. The first major change occurred in the area of corporate leverage. For example, two major Korean companies, Samsung Electronics and Pohang Steel (POSCO), have cut down on their debt-asset ratio — Samsung went from 74.7% in 1997 to 20.9% in 2007, and POSCO from 58.6% to 19.6%.[34] The average debt-asset ratio for the ten largest corporations (as measured by market capitalization) dropped from 73.6% in 1997 to 42.5% in 2007.[35] This reduction has been matched by an increase in average return on asset from just 1% in 1997 to 7.8% in 2007.[36]

The corporate and financial sectors have also undergone drastic restructuring in parallel to changes in financial leverage. Of the ten largest business groups (chaebols) in assets as of the end of 1997, three (Daewoo, Ssangyong, and Donga) disappeared since.[37] In addition, the Hyundai group, the largest group in 1997, has split into Hyundai Motors group and two smaller Hyundai groups.[38] As a result, there has been a drastic change in ranking of business

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[34] For raw data, *see* Korea Listed Companies Association KOCO Information, http://www.kocoinfo.com (last visited June 21, 2010); figures presented herein reflect the authors' calculations.

[35] For raw data, *see* Korea Fair Trade Commission Online Provision of Enterprises Information (OPNI), http://groupopni.ftc.go.kr (last visited June 21, 2010); figures presented herein reflect the authors' calculations.

[36] *Id.*

[37] *Id.*

[38] *Id.*

groups. Since chaebols are family-controlled business groups that control several dozens of individual firms and dominated the Korean economy, this is a dramatic change during the ten-year period.

The banking sector also saw heavy consolidations. As detailed in Table 2, as of the end of 1997, each of the ten largest banks (based on assets) have undergone consolidation.[39] Eight of the ten largest banks either merged or acquired other smaller banks to produce the three largest, and presumably more competitive, banks.[40] The Korean government also passed the Financial Holding Company Act in October 2000, enabling commercial banks, securities companies, and other financial firms to be managed under a single corporate roof.[41] This was done, in part, because combining commercial banking and other financial firms could diversify risk and help enhance the sustainability of the financial firms.[42] Interestingly, the United States has used a similar approach in responding to the current American financial crisis, as seen by Bank of America's takeover of Merrill Lynch, as well as designating Goldman Sachs and Morgan Stanley as "commercial banks".[43]

The Korean government also intervened in specific financial consolidations. The cases of two large banks—Korea First Bank and Korea Exchange Bank—vividly illustrate this point. To save the bank from collapsing at the onset of the crisis, the Korean government through its agency nationalized these banks with 100% ownership.[44] After the dust settled and the financial situation stabilized, the Korean government then engineered sales of the majority of shares of these banks to foreign investors.[45] Standard Chartered Bank acquired a majority stake in Korea First Bank, and Lone Star Fund acquired a majority interest in Korea Exchange Bank.[46] Notably, in contrast to general hostility against nationalization in the United States during the crisis, the interim government takeover of banks went quite smoothly in Korea, perhaps because of the severity of the crisis and lack of clear alternatives.

**Table 2: Consolidation of Commercial Banks After the Asian Financial Crisis[47]**

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[39] *See* Table 2, *infra*.

[40] Compiled from data from Data Analysis, Retrieval and Transfer (DART) by the Korean Financial Supervisory Service. (http://englishdart.fss.or.kr).

[41] *See* Stephanie Strom, *U.S. Firm Has Control of Korea First Bank*, N.Y. Times B1 (Sep. 17, 1999).

[42] Korea Institute for International Economic Policy, Ten Years After the Korean Crisis: Crisis, Adjustment and Long-run Economic Growth, Conference proceeding 08-02, December 30, 2008, *available at* http://www.kiep.go.kr/eng/publications/pub02_view.jsp?page=1&no=183844&sCate=013001&sSubCate=&tabValue=1.

[43] Robert Weissman, Testimony before the Hearing on "Too Big To Fail – The Role for Bankruptcy and Antitrust Law in Financial Regulation Reform," the House Judiciary Committee, Subcommittee on Commercial and Administrative Law, October 22, 2009.

[44] For raw data, *see* Korean Financial Supervisory Service Data Analysis, Retrieval and Transfer (DART), http://englishdart.fss.or.kr (last visited June 21, 2010); figures presented herein reflect the authors' calculations.

[45] *See supra* note 44.

[46] For a detailed discussion of these events, *see* Appendix, *infra*.

[47] For raw data, *see* Bureau van Dijk Electronic Publishing Bankscope, https://bankscope2.bvdep.com/version-2010617/Home.serv?product=scope2006 (last visited June 21, 2010); *see also* Korean Financial Supervisory Services Financial Statistics Information System, http://efisis.fss.or.kr/index.html (last visited June 21, 2010). The following changes in the Korean banking sector were observed since the Asian financial crisis: (1) Koomin

(continued)

| Dec. 1997 | | | Dec. 2007 | | |
|---|---|---|---|---|---|
| Name | Rank (1997) | Assets (trill. won) | Name | Rank (2007) | Assets (trill. won) |
| Korea First Bank | 1 | 76.6 | Kookmin Bank | 1 | 218.8 |
| Hanil Bank | 2 | 58.3 | Woori Bank | 2 | 187.9 |
| Kookmin Bank | 3 | 57.0 | Shinhan Bank | 3 | 169.0 |
| Korea Exchange Bank | 4 | 50.2 | Nonghyup | 4 | 160.5 |
| Korea Commercial Bank | 5 | 50.2 | Korea Industrial Bank | 5 | 122.6 |
| Shinhan Bank | 6 | 44.9 | Keeup Bank | 6 | 119.3 |
| Chohung Bank | 7 | 40.9 | Hana Bank | 7 | 116.9 |
| Seoul Bank | 8 | 38.9 | Korea Exchange Bank | 8 | 79.8 |
| Hana Bank | 9 | 17.2 | SC First Bank | 9 | 52.9 |
| Boram Bank | 10 | 14.9 | Citi Bank | 10 | 46.9 |

In fact, the government has implemented a series of reforms across a spectrum of corporate and financial sectors and markets, including corporate governance, accounting, banking, monetary policy, foreign exchange, capital markets, bankruptcy law and financial supervision.[48] It is important to note that although these are governmental initiatives rather than the ones by the private sector, these reforms are invariably in the direction of market liberalization and market competition.

Some of the major regulatory reforms undertaken between October 1997 and August 2001 include:[49]

1. Adoption of the floating exchange rate system and the foreign exchange deregulation that facilitate freer foreign exchange transactions and international capital flows;

Bank acquired Daedong Bank (06/98), Korea Long Term Credit Bank (12/98), Dongnam Bank (06/98) and Jootaek Bank (11/01); (2) Shinhan Bank acquired DongHwa Bank (06/98), Jeju Bank (01/01) and Chohung Bank (04/06). Chohung previously had acquired Chungbook Bank (04/99) and Kangwon Bank (09/99); (3) Korea Commercial Bank and Hanil Bank merged and became Hanbit Bank (12/98), which then acquired Pyunghwa Bank (12/01). Hanbit changed its name to Woori Bank; (4) Hana Bank acquired Chungcheong Bank (06/98), Boram Bank (11/98) and Seoul bank (12/02); (5) Korea First Bank was sold to New Bridge Capital (1999), which then sold it (with a profit of more than 5 trillion won) to Standard Chartered Bank in 2005, which renamed the bank to SC First Bank; and (6) Korean Exchange Bank had been sold to Lone Star Fund in 2003. Recently, Lone Star announced its intention to sell it within one year after legal problems had been cleared with the Korean government. *See* Table 4, *infra*.

48 *See supra* note 46.

49 *See supra* note 46.

2. Lifting of the limit on foreign equity ownership and related liberalization measures that reduce the costs of foreign institutional investors in Korea;

3. Corporate government reforms, such as the requirement that firms of a certain size should have outside independent directors on their board;

4. Accounting reforms in terms of the mandated use of external auditors and the establishment of the standard accounting governing body and accounting rules;

5. Fair trading law that penalizes inside trading and regulation concerning the internal transactions within a business group;

6. Capital market measures that promote corporate discipline and consolidation such as mergers and acquisitions by domestic and foreign institutions;

7. Financial holding company law that permits integration of commercial banks and other financial firms;

8. Corporate restructuring regulation that requires greater transparency and clarifies the role of banks during corporate restructuring;

9. Corporate bankruptcy laws that define procedures concerning liquidation, bankruptcy, and reorganization;

10. Interim increase in the amount of bank deposit insurance and measures that give an authority for more independent monetary policy to Bank of Korea.

Notably, the general policy directions of many of these regulatory measures came from the IMF.[50] The Korean government was also eager to reform inadequate Korean corporate and financial practices and infrastructure by replacing them with more modern systems and infrastructure found in advanced countries.[51] Although these reforms took place under government initiatives, since these modern systems and infrastructure were more liberalized than the existing systems in Korea and other emerging market countries, the end effect of these reforms was a shift towards liberalization. The positive experience of these reforms in Korea is consistent with academic studies on the impact of market liberalization in emerging markets.[52] One Korea-specific study also found that there is a positive impact of outside independent director on firm performance.[53] Thus, it appears that the substance of the

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[50] *See* Asian Dev. Bank, EMERGING ASIAN REGIONALISM: TEN YEARS AFTER THE CRISIS - A STUDY BY THE ASIAN DEVELOPMENT BANK, OFFICE OF REGIONAL ECONOMIC INTEGRATION, *available at* http://aric.adb.org/ emergingasianregionalism/.

[51] *See* Korea Institute of International Economic Policy, *supra* note 42.

[52] *See, e.g.,* Peter Blair Henry, *Stock Market Liberalization, Economic Reform and Equity Market Prices*, 55 J. FIN. 529 (2000) (stating that stock markets liberalization in emerging countries should generate a revaluation of equity prices and a fall in the cost of equity capital).

[53] *See* Jongmoo Jay Choi, Sae Woon Park & Sehyun Yoo, *The Value of Outside Directors: Evidence from Corporate Governance Reform in Korea*, 42 J. FIN. QUANT. ANAL. 941-962 (2000) (providing evidence in (continued)

financial reforms is important, while the driving source of the reforms (i.e., government or private sector) is not — a distinction that seems to have been overlooked in some of the recent political debate in the United States.

## IV. The American Financial Crisis

### A. Causes and Implications of the American Financial Crisis

It is widely accepted that the current global financial crisis stemmed from a confluence of several factors and events. The broad underlying causes of the crisis can be grouped into three main categories: (1) macroeconomic or market factors; (2) risk management failures; and (3) inadequate regulations or policies.[54]

Complacency brought about by a long period of expansion in credit and leverage, combined with rapid financial innovation, is among the most often-cited macroeconomic or market factors for the crisis.[55] The crisis was preceded by more than a decade of benign economic conditions, manifested by low interest rates, low inflation and growth volatility, and abundant liquidity.[56] Both creditors and investors shared an increased appetite for risk and leverage during this period.[57] At the same time, there was a growth of innovative and

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support of the positive impact of outside directors and board independence for Korea in the aftermath of the Asian financial crisis).

[54] Viral Acharya and Matthew Richardson, Eds., 2009. RESTORING FINANCIAL STABILITY: HOW TO REPAIR A FAILED SYSTEM (2009); Markus K. Brunnermeier, *Deciphering the Liquidity and Credit Crunch 2007-2008*, 23 J. OF ECON. PERSPECTIVES 77 (2009). *See also* FINANCIAL SERVICES AUTHORITY, THE TURNER REVIEW – A REGULATORY RESPONSE TO THE GLOBAL BANKING CRISIS (2009); INT'L MONETARY FUND, GLOBAL FINANCIAL STABILITY REPORT: FINANCIAL STRESS AND DELEVERAGING - MARCOFINANCIAL IMPLICATIONS AND POLICY (2008), *available at* http://www.imf.org/external/pubs/ft/gfsr/2008/02/pdf/text.pdf (describing the responses taken in Eastern European emerging markets) [*hereinafter* IMF 2008].

[55] *See* INTERNATIONAL MONETARY FUND, INITIAL LESSONS OF THE CRISIS FOR THE GLOBAL ARCHITECTURE AND THE IMF (2009); Donald L. Kohn, Vice Chairman, Bd. of Governors of the Fed. Res. System, Productivity and Innovation in Financial Services, Address at the Official Celebration of the 10th Anniversary of the Banque Centrale du Luxembourg (Nov. 12, 2008), *available at* http://www.federalreserve.gov/newsevents/speech/kohn20081112a.htm; Mario Draghi, Governor, Bank of Italy, Monetary Policy and New Fiscal Instruments, Address at the 2007 Money and Banking Conference of the Central Bank of Argentina, Buenos Aires, (June 4, 2007) *available at* http://www.bis.org/review/r070608b.pdf.

[56] *See* Ignazio Visco, Deputy Director General, Bank of Italy, Global Imbalances in the Financial Crisis and the International Monetary System, Distinguished Lecture at the 18th International "Tor Vergata" Conference (Dec. 4, 2009), *available at* http://www.bis.org/review/r091211d.pdf. *See also* Masaaki Shirakawa, Governor, Bank of Japan, International Policy Response to Financial Crises, Remarks at the Symposium Sponsored by the Federal Reserve Bank of Kansas City (Aug. 22, 2009) *available at* http://www.kansascityfed.org/publicat/sympos/2009/papers/Shirakawa.08.24.09.pdf; INTERNATIONAL MONETARY FUND, GLOBAL FINANCIAL STABILITY REPORT, MARKET UPDATE, JULY 2009 [*hereinafter* GFSR Update].

[57] *See* Bank for Int'l Settlements, *Private Equity and Leveraged Finance Markets* (Committee of the Global Financial System (CGFS) Papers No. 30, July 2008); Bank for Int'l Settlements, *International Banking and*

(continued)

complex structured financial products that made it easier to trade credit risk and thereby increased the perceived liquidity of these products.[58] For example, bundling mortgages into asset-backed securities (ABS), which were then traded rather than held, created an impression that the risk of such assets to an institution was minimal, even though it clearly remained in the system.[59] As a result, there was an unprecedented expansion of mortgages and credit in the United States.[60]

Clearly, multiple risk management failures that left the financial system vulnerable to excessive risk-taking contributed to the financial crisis. It is evident that market discipline—which operates as a check against excesses—had failed. Compensation practices and incentives for executives and traders as well as bankers, underwriters, and rating agencies, encouraged the weakening of underwriting and credit standards in favor of promoting volume growth.[61] Inadequate methodologies and incentives for fee revenues may have compromised credit rating agencies' due diligence, while institutional investors' search for yield resulted in excessive reliance on the credit rating agencies.[62] Finally, banks may have underestimated the liquidity risk in their funding models, due to the misperception of counterparty risk of complicated derivative instruments such as credit default swaps, and the

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*Financial Markets Developments*, BIS QUARTERLY REVIEW, June 2009; Bank for Int'l Settlements, *International Banking and Financial Markets Developments*, BIS QUARTERLY REVIEW, June 2008; T. Adrian & H. S. Shin, *Liquidity and Leverage*, (Fed. Res. Bank of N.Y. Staff Report No. 328, 2008); GFSR Update, *supra* note 56; GFSR, *supra* note 2; Financial Services Authority, *supra* note 54. Examples of increased risk undertaken by financial institutions before the crisis include an increase in debt ratios of the five largest US investment banks by about four-folds in 1994, as well as a dramatic increase in mortgage backed securities in more recent periods. *See* Choi & Papaioannou, *supra* note 6.

[58] *See* Brunnermeier, *supra* note 54; Charles W. Calomiris, *Prudential Bank Regulation: What's Broke and How to Fix It*, *in* Terry Anderson & Richard Sousa (Eds.), REACTING TO THE SPENDING SPREE: POLICY CHANGES WE CAN AFFORD 17-34 (2009) [*hereinafter* Prudential Bank Regulation].

[59] *See* Prudential Bank Regulation, *supra* note 58; Financial Services Authority, *supra* note 54.

[60] Prudential Bank Regulation. *supra* note 58; Charles W. Calomiris, *The Sub-prime Turmoil: What's Old, What's New, and What's Next*, 15 J. OF STRUCTURED FIN. 6 (2009).

[61] John F. Laker, The Global Financial Crisis – Lessons for the Australian Financial System: Opening Remarks, Australian Economic Forum, Sydney (2009), *available at* http://www.apra.gov.au/speeches/AEF_190809_JL.cfm.

[62] *See* Columbia Law School, *Credit Rating Agencies Must Be More Accountable to Restore Confidence in Financial Markets*, http://www.law.columbia.edu/media_inquiries/news_events/2009/august2009/coffee-credit (last visited October 9, 2010). *See also* U.S. Department of the Treasury, Press Release, Administration's Regulatory Reform Agenda Moves Forward Credit Rating Agency Reform Legislation Sent to Capitol Hill (July 21, 2009), *available at* http://www.ustreas.gov/press/releases/tg223.htm; SECURITIES INDUSTRY AND FINANCIAL MARKETS ASSOCIATION, RECOMMENDATIONS OF THE SECURITIES INDUSTRY AND FINANCIAL MARKETS ASSOCIATION CREDIT RATING AGENCY TASK FORCE (2008), *available at* http://www.sifma.org/capital_markets/docs/SIFMA-CRA-Recommendations.pdf; Kurt N. Schacht, *Credit Agencies and Investors: Lessons Learned*, LOMBARD STREET, http://www.finreg21.com/lombard-street/credit-ratings-agencies-and-investors-lessons-learned (Oct. 19, 2009).

misunderstanding of extreme "black swan" events.[63] In some instances, banks established off-balance sheet entities to facilitate rapid growth and generate fee income.[64] This implied poor disclosure of material corporate risk, which further weakened the efficacy of corporate risk management.

Policy institutional frameworks have also proven inadequate in preventing the crisis. Regulatory and prudential norms necessary for supervisory oversight significantly lagged behind financial innovation.[65] In addition, financial supervisors lacked a macro-prudential perspective, failed to monitor off-balance sheet entities and liquidity buffers, relied too heavily on ratings for capital charges, and failed to take countervailing actions.[66] In addition, central bank liquidity frameworks were not flexible enough to cope with unexpected liquidity shocks. In some cases, crisis management and deposit insurance schemes proved to be outdated, and various regulatory agencies were compartmentalized without sufficient regard to the interdependencies of financial institutions and markets.[67] Further, valuation, disclosure, and accounting inadequacies seem to have exacerbated the situation. For example, deficiencies concerning disclosure requirements in accounting methods and gaps associated with the valuation and financial reporting of structured products may have been a key contributing factor.[68]

There have been estimates that between the start of the crisis and June 2009, the global financial system has suffered worldwide writedowns and credit losses of over $1.5 trillion.[69] These losses are concentrated in the Americas (approximately $1 trillion) and Europe (over

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[63] *See* Nassim N. Taleb, THE BLACK SWAN: THE IMPACT OF HIGHLY IMPROBABLE (2007) (examining the effects of "black swan," or "highly improbable" events).

[64] *See* Juliusz Jablecki, *The Impact of Basel I Capital Requirements On Bank Behavior and The Efficacy of Monetary Policy*, INT'L J. OF ECON. SCI. & APPLIED RES. (June 2009) at 16, 19-29 (describing how banks were able to establish off-balance sheet entities).

[65] Takatoshi Kato, Deputy Managing Director, Int'l Monetary Fund, Keynote Address at The 43rd SEACEN Governors' Conference Jakarta, Indonesia, The Financial Crisis and Economic Outlook - Lessons for Securing the Benefits of Financial Deepening (Mar. 21, 2008), *available at* http://www.imf.org/external/np/speeches/2008/032108.htm) (describing how financial innovation has been carried out in the last few decades). *See also* Prudential Bank Regulation, *supra* note 58; Financial Services Authority, *supra* note 54.

[66] *See* FINANCIAL STABILITY FORUM, REPORT OF THE FINANCIAL STABILITY FORUM ON ENHANCING MARKET AND INSTITUTIONAL RESILIENCE 12-21 (Apr. 7, 2008), *available at* http://www.financialstabilityboard.org/publications/r_0804.pdf (assessing the deficiencies in the prudential supervision of capital, liquidity, and risk management).

[67] *Id.*

[68] *See* Acharya and Richardson, *supra* note 54; Prudential Bank Regulation, *supra* note 58; Financial Services Authority, *supra* note 54; INT'L MONETARY FUND, THE RECENT FINANCIAL TURMOIL -- INITIAL ASSESSMENT, POLICY LESSONS, AND IMPLICATIONS FOR FUND SURVEILLANCE 8-10 (2008), *available at* https://www.imf.org/external/np/pp/eng/2008/040908.pdf (assessing the importance of lack of valuation, disclosure, and accounting as triggers for a financial crisis).

[69] *See* Int'l Monetary Fund, *supra* note 68.

$450 billion), while Asia has been minimally affected (around $50 billion).[70] As a result of these stringent conditions, banks in advanced countries increased deleveraging and tightened lending standards, while simultaneously lowering cross-border exposure.[71]These developments indicate that Asia has been the least affected by the US crisis, possibly as a result of policy reforms implemented in response to the Asian financial crisis as well as the Chinese growth and stimulus measures implemented to counter the current global recession.[72]

### B. Policy Responses to the U.S. Financial Crisis

The initial policy response to the crisis was swift and substantial, reflecting government concern on weaknesses in the banking sector that could quickly lead to a widespread crisis. Policy interventions focused first on providing liquidity in the financial sector. However, as the crisis intensified in the Fall of 2008, governmental responses were aimed at maintaining financial sector stability and, in many emerging markets, at avoiding disorderly exchange rate depreciations.[73] In some countries, vulnerabilities that had accumulated prior to the crisis constrained any possible responses.[74] This was more pronounced in cases of substantial foreign-currency borrowing and unsustainably high rates of credit growth.[75]

Public intervention measures to support the financial system involved various institutions, including the government, government agencies and the central bank, and employed different schemes and operations. Globally, the most common schemes were: (i) deposit insurance measures, with governments often injecting funds to deposit insurance agencies; (ii) bank debt guarantees, with governments aiming to ensure the smooth functioning of wholesale borrowing and credit markets; (iii) central bank measures to ease liquidity, with central banks establishing new uncollateralized lending facilities, providing loans using non-traded collaterals, and rolling over lending via daily repos, as well as other government liquidity support, such as government placements of deposits to banks; (iv) recapitalizations, with governments injecting capital in troubled banks and mortgage agencies in exchange for preferred or common shares; (v) purchases of assets, with governments buying mortgages and other "toxic" assets from banks using different types of financing; (vi) bank loans, with central banks and government agencies providing collateralized lending, subordinated loans and other forms of capital to banks. Table 3 indicates such response measures for selected developed and emerging market countries.

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[70] *Id.*

[71] Bank for International Settlements, International Banking and Financial Market Developments, BIS Q. REV. (Mar. 2009).

[72] *See* Choi & Papaioannou, *supra* note 6, at 8.

[73] *See, e.g.,* IMF 2008, *supra* note 54.

[74] *See, e.g., id.,* at 71. *See also* GFSR, *supra* note 2.

[75] *See* GFSR*, supra* note 2 (describing the vulnerability of financial markets in some emerging markets and its implication for systemic risk). *See also* IMF 2008, *supra* note 73.

**Table 3: Financial System Public Intervention Measures (2008-2009)**[76]

| | Deposit Insurance | Debt Guarantee | Liquidity Provision | Recapitalization Schemes | Asset Management | |
|---|---|---|---|---|---|---|
| | Establish, increase or expand | Wholesale borrowing | New measures introduced | Capital plans established | Asset purchase plans | Loan guarantees |
| France | | X | | X | | X |
| Germany | X | X | | X | X | X |
| Italy | | X | X | X | | X |
| Japan | | | X | X | X | |
| Spain | X | X | | | X | X |
| South Korea | | X | X | X | X | |
| United Kingdom | X | X | X | X | X | X |
| United States | X | X | X | X | X | X |
| Brazil | | | X | | X | |
| China | | | X | | | |
| India | | | X | | | |
| Russia | X | X | X | X | X | X |

In general, when banking systems were under added pressure from deposit outflows and possible bank failures, policy responses primarily focused on maintaining stability. To bolster confidence in the banking system, governments raised the deposit-insurance limit and expanded the scope of domestic deposit insurance schemes to resolve problem banks.[77] As the crisis unfolded, some governments also auctioned excess budgetary funds to banks to maintain liquidity.[78] Gradually, these auctions were scaled back and replaced by an ever-widening array of central bank facilities including quantitative easing.[79] In addition, central

[76] *See* GFSR, *supra* note 2. Additional data from authors' compilation.
[77] *See* GFSR, *supra* note 2.
[78] *Id.*
[79] *Id.*

banks offered guarantees for inter-bank lending to qualifying banks, covering losses in the event that the counterparty fails.[80]

Given the magnitude of the problems, the US government instituted a variety of monetary and financial measures. The Fed undertook substantial liquidity injections as the economic downturn was testing the resilience of the banking systems.[81] The Treasury along with the Fed also introduced significant regulatory forbearance by easing loan classification and provisioning requirements, and also took steps to loosen accounting standards to limit banks' mark-to-market losses and expand access to their unsecured loan auctions.[82] In most cases, the combination of central bank liquidity provision and regulatory forbearance allowed the banking system to overcome the strains from the crisis relatively well, although some banks had to be taken into receivership by the FDIC or directly capitalized by the Treasury.[83]

As financial sector problems spread to the real economy, fiscal stimulus packages were instituted by the Administration and Congress to support domestic demand. The packages included tax cut, as well as additional spending to support such strategic sectors as clean energy, health care and education in addition to infrastructure and unemployment assistance.[84] As the first signs of economic recovery and financial stabilization have been observed, indicating that the monetary and fiscal public intervention measures undertaken have been effective, the challenge to policymakers now is how and when these injected funds can be reversed to reduce the skyrocketing public debt and to fight the looming inflationary pressures.[85] Already, the United States, along with other countries, has started to gradually retire some of the introduced measures that aimed to provide guarantees and enhance liquidity in the banking system.[86]

## V. Commonalities Between The Asian and U.S. Crises and Risk Management

### A. Fundamental Causes of the Asian and U.S. Financial Crises

Many researchers have argued that financial crises share many common causes related to fundamental factors.[87] In particular, those economic and/or financial factors that indicate economic distress and adversely affect investors' sentiment should be considered as the root

[80] *Id.*
[81] *See* Bernanke, *supra* note 4.
[82] *Id. See also* Financial Services Authority, *supra* note 65.
[83] Financial Services Authority, *supra* note 65. *See also* Geithner, *supra* note 4.
[84] *See* Geithner, *supra* note 4.
[85] *See* GFSR, supra note 2.
[86] *See* Choi & Papaioannou, *supra* note 6, at 10.
[87] *See, e.g.*, Carmen M. Reinhart & Kenneth S. Rogoff, *The Aftermath of Financial Crises* 2 (Nat'l Bureau of Econ. Research, Working Paper No. 14656, 2009) (noting that "the antecedents…in banking crises in rich countries and emerging markets have a surprising amount in common," and that in the crises there are similar patterns in housing and equity prices, unemployment, and government revenue and debt).

causes of financial crises. Among these factors are a widening current account deficit, a deterioration of fiscal deficit, a significant economic slowdown or recession, the bursting of stock and/or real estate price bubbles, and increases in the level of short-term foreign debt.[88]

However, the exact timing of the crisis is difficult to determine on the basis of fundamentals.[89] Further, most contenders of the fundamental approach agree that extended credit is at the core of crises, although its source may vary, with Krugman focusing on the monetization of government deficits and McKinnon and Pill pointing out to the role of foreign capital inflows channeled through domestic banks, deposit insurance, moral hazard, and overlending.[90]

The U.S. financial crisis of 2007-09—although different from the Asian financial crisis of 1997-1998 in terms of scale, impact and the role played by financial innovation—has exhibited many common causes: prevailing macroeconomic imbalances, large and persistent capital flows, excessive leverage, the growth of sub-par investments and asset price bubbles, including a property bubble.[91] Several observers note that the principal underlying shortcoming of most of these factors is a failure of risk assessment, which had also been identified as a determining factor for the Asian crisis.[92] However, given the inherent inadequacy and political difficulty of arriving at institutional and regulatory solutions in

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[88] *See, e.g.*, Giancarlo Corsetti et al., *What Caused the Asian Currency and Financial Crisis? Part I: A Macroeconomic Overview* 6-24 (Nat'l Bureau of Econ. Research, Working Paper No. 6833, 1998) (attributing the Asian financial crisis to macroeconomic structural imbalances manifested in current account deficits); Graciela L. Kaminsky, *Currency and Banking Crises:The Early Warnings of Distress* 6-9 (Bd. of Governors of the Fed. Reserve Sys., International Finance Discussion Papers No. 629, 1998) (arguing that financial crises generally occur in fragile economies in distress from factors such as fiscal deficits, international economic slowdown, and foreign capital outflows); Paul Krugman, *A Model of Balance-of-Payments Crises*, 11 J. MONEY, CREDIT AND BANKING 311, at 311-12, 319 (1979) (arguing that balance-of-payments crises occur when speculators anticipate an abandonment of fixed exchange rate, possibly due to an increase in foreign debt, and seeks to acquire the government's foreign reserves).

[89] *See, e.g.*, Graciela L. Kaminsky & Carmen M. Reinhart, *The Twin Crises: The Causes of Banking and Balance-of-Payments Problems* 15 (Bd. Of Governors of the Fed. Reserve Sys., International Finance Discussion Papers No. 544, 1996) (noting that even knowing that there was a balance-of-payments crisis does not help predict a future banking crisis).

[90] *See, e.g.,* GFSR *supra* note 2; Ronald I. McKinnon & Huw Pill, *Credible Economy Liberalizations and Overborrowing*, 87 THE AMERICAN ECONOMIC REVIEW 189, 192-193 (1997) (proposing that in an internationally liberalized economy, banks, assured by government guarantee of bank deposits, may signal higher payoffs for investors than the liberalization reforms warrant, causing a drop in domestic savings and overborrowing from the international capital market).

[91] *See* Best, *supra* note 25.

[92] *See* Ilene Graber, *Identifying Risks, Preventing Crisis: Lessons from the Asian Crisis*, 34 JOURNAL OF ECONOMIC ISSUES 377, 377-83 (2000) (arguing that countries have sought to remedy the currency, flight, fragility, contagion and sovereignty risks). *See also* Paul Volcker, *A Perspective on Financial Crises*, 43 FEDERAL RESERVE BANK OF BOSTON CONFERENCE SERIES 254, 266 (1999) (explaining the concern that "letting banks judge their own credits and capital requirements" could lead to problems of transparency and auditing).

preventing the crisis, the question is whether crises of this type are inevitable, irrespective of how well we can prepare ex ante.[93]

While US credit growth, especially mortgage loans, increased dramatically between 2002 and mid-2007, US real estate prices rose by almost 50 percent during this period.[94] These signs were also present in East Asia before the 1997 crisis.[95] However, what helped fuel the US loan expansion was the low interest rate environment and ease of mortgage securitization that prevailed in the decade before the US crisis, while in the Asian crisis, it was large capital inflows stemming primarily from private sector borrowing.[96] Nonetheless, it is clear that lax underwriting standards and improper risk management were present in both the US and Asian crises.[97]

As the US financial crisis quickly became a global financial crisis, it became evident that the same macroeconomic and microeconomic factors were also to be blamed in the countries most affected. At the macroeconomic level, the main contributing factors were the persistence of large global current account imbalances and the sustained period of low real interest rates, which generated credit booms in a number of countries and an increasingly intense "search for yield."[98] At the microeconomic level, the contributing factors were failures in risk management and corporate governance arrangements, distorted incentives, inadequate investor due diligence, and weaknesses in regulatory frameworks, in particular porous regulatory borders.[99]

### B. What Triggered the Crises

Under conditions of economic and/or financial distress, what triggers a financial crisis is an event – such as the announcement of disappointing unemployment figures or dramatic decreases in corporate profits and financial problems of a prominent bank – that completely undermine the confidence in the system and makes investors think of the dangers of a financial collapse.[100] The announcement of the insolvency of the Lehman Brothers in the case of the US crisis and that of a persistent decline in company earnings in the case of the

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[93] *See generally* Best, *supra* note 25 (pointing to the uncertainty in risk assessment as an obstacle to objective and accurate valuation).
[94] Bandid Nijathaworn, The Current Financial Crisis, Lessons Learned, and Future Implications, Keynote Address at the 11th SEACEN Conference of Directors of Supervision of Asia-Pacific Economies, Bangkok, July 29, 2009, *available at* http://www.bis.org/review/r090811e.pdf.
[95] *Id.*
[96] *Id.*
[97] *See* Bank of International Settlements, *supra* note 71.
[98] IMF, 2008, *supra* note 73. *See also* GFSR, *supra* note 2.
[99] *See* Best, *supra* note 25. *See also* Laker, *supra* note 61; Nijathaworn, *supra* note 94; Jablecki, *supra* note 64.
[100] *See* CHARLES P. KINDLEBERGER, MANIAS, PANICS AND CRASHES: A HISTORY OF FINANCIAL CRISES 36–45 (1978) (describing the examples of how the exogenous shocks affected the economics of the business cycle).

Asian crisis unnerved financial markets and became the triggering factors for both of these financial crises.[101]

### C. Policy Responses

In response to the Asian crisis, many important policy reform initiatives were undertaken, aiming at strengthening the robust risk management discipline of the domestic financial systems.[102] The emphasis of these reforms was mainly on instilling prudent regulations, risk-based supervision and strong risk management.[103] In particular, these reforms aimed at curtailing excessive leverage and household indebtedness, so as to help maintain domestic financial stability.[104] In the case of the US and ensuing global crisis, the Basel Committee on Banking Supervision agreed in early September 2009 on a comprehensive set of measures to strengthen micro-prudential regulation, supervision and management of risks arising from systemic, interconnected banks.[105] Moreover, it intended to further look to strengthen the regulatory capital framework, to enhance loan loss provisioning rules, to establish a global liquidity standard, to develop a systemic risk capital charge, and to minimize the conflict between accounting standards and prudential supervision, and to address cross-border resolutions of financial institutions.[106]

### D. Implications for Risk Management

It has been widely argued that international creditor banks operating in the Asian markets had assumed that their exposure to private borrowers would be protected by an implicit local government guarantee.[107] This assumption may have induced them to take on larger exposures than warranted by normal credit standards. The Asian financial crisis proved that such expectation was unrealistic as the government guarantee turned out no avail, without the assistance from the IMF and the international community. This confirmed the moral hazard problem, as the risky loans from international banks were paid up from the IMF-assisted funds.[108]

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[101] *See* Graciela L. Kaminsky & Sergio L. Schmukler, *What Triggers Market Jitters? A Chronicle of the Asian Crisis*, 18 J. INT'L MONEY & FIN. 537, 542 (1999) (noting the stock markets in Indonesia, Korea, and Thailand declined dramatically per day during the crisis, which showed the great volatility).
[102] *See* Best, *supra* note 25. Examples of policy reforms include improved value at risk models, fair value accounting, and needed, and regulations concerning systemic risk.
[103] *Id.*
[104] *Id.*
[105] Basel Committee on Banking Supervision, Comprehensive Response to the Global Banking Crisis (Press Release, Sep. 7, 2009). For policy recommendations after the Asian financial crisis, *see* BASEL COMM. ON BANKING SUPERVISION, *Supervisory Lessons to be drawn from the Asian Crisis* 3 (Working Papers, No. 2, June., 1999). [*hereinafter* Basel 1999].
[106] *See* Basel 1999, *supra* note 105, at 3.
[107] *Id.*
[108] *See* Stephan Haggard, THE POLITICAL ECONOMY OF THE ASIAN FINANCIAL CRISIS (2009). (discussing the moral hazard problems related to the Asian financial crisis).

Another important lesson is the recognition of the extent of "the interrelationship between different types of risk across markets and countries in times of crisis as well as the speed and extent of contagion."[109]

From the standpoint of a lending bank, the Asian crisis also proved the importance of country risk. The traditional concept of sovereign and transfer risk must be extended to include systemic risks posed by private sector counterparties. Since the Asian financial crisis, several measures were undertaken to improve risk management capabilities of individual banks. In particular, the Basle Committee overhauled the weighting schemes of internal and external ratings for determining country risk.[110] In addition, it placed a greater emphasis on banks' internal risk assessment practices as well as counterparty risk exposures, while supervisory practices moved toward a more risk-based approach for measuring and managing risk.[111] However, the improvements since the Asian crisis did not prove adequate to avert banks' supervisory and regulatory breakdowns as evidenced in the U.S. crisis.

Meanwhile, the measurement of risk interconnections during crisis periods, and the speed with which emerging market can become illiquid, pointed to the importance of using stress testing and scenario analysis in addition to traditional risk management methods.[112] Further, the role of rating agencies should be examined carefully because in both the Asian and U.S. crises, there were little changes in their ratings of sovereign and corporate borrowers before the crisis, but there were very swift and large rating downgrades after the crisis broke, which actually exacerbated the crisis.

### E. Derivatives Regulation

From the U.S. crisis, it is clear that the extent of bank risk is also related to the evolution of the financial systems and products overall, which has important implications for risk governance and regulation.[113] First and foremost, as risk can materialize very rapidly and substantially, banking institutions should maintain adequate capital levels at all times. This became evident as only a short time before July 2007, the spreads on bank credit default swaps – a key forward indicator of the perceived riskiness of banks – had reached record lows.[114]

The nature and scope of the credit risks that emerged in the global financial system from complex, structured sub-prime instruments, and their interconnections with market risks were not adequately understood. Instead, it was widely believed that the development of

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[109] *See* Basel 1999, *supra* note 105.
[110] *Id. See also* Best, *supra* note 25.
[111] *See* Basel 1999, *supra* note 105.
[112] *Id.*
[113] *See* Prudential Bank Regulation, *supra* note 58, at 17, 21 (stating the effect of the failure of the prudential regulation of commercial banks and investment banks).
[114] *See* Choi & Papaioannou, *supra* note 6, at 6.

securitization markets would distribute credit risks to a diversified group of investors and thereby making banks safer and counterparty risk for individual investors minimal.[115] However, when the crisis broke, the majority of securitized credit risks were held by major international banks and by unregulated, highly-leveraged near-banks, which lack adequate understanding of the risks involved and possible value losses from adverse unexpected market developments.[116] Given the difficulty in understanding and valuing these derivative transactions and their impacts on systemic risk, there may be a call for regulating derivatives-related trading.

### F. Compensation and Board Governance

In addition to inadequate financial regulation and excessive reliance on uninformative credit ratings, the U.S. crisis also suggests that misaligned risk incentives for mortgage underwriters and structured-instrument sellers were among the core problems that led to the crisis. Since bonus or market-based compensations may lead to excessive risk-taking by financial institutions, several lessons could be learned in this regard. First, managerial compensation (including traders') should be aligned with the objective of ensuring long-term sustainability of the institution as well as limiting its contribution to systemic risk. Specifically, variable remunerations such as bonuses, stock options or commissions should be symmetric with changes in either direction depending on long-term performance and should also be kept within some pre-determined range. Clawback provision and vest period limitation may also be needed to constrain personal exploitations of asymmetric corporate risk-taking as well as profiting from short-run market gyrations.

In principle, the board is responsible for developing the executive compensation policies. However, given the fact that many board directors are selected *de facto* by the CEO, it is doubtful that they would have either independence or expertise to go against the CEO and to take account of the interests of shareholders or the aggregate economy. Provisions that executive compensations should be voted upon in the shareholders meeting may help. However, the recent experience of banking firms boosting bonuses even in the face of declining profits or government bailouts suggests that these accountability measures at the individual financial institution level should be incorporated into a country's prudential macrofinancial framework for governance.[117]

Good governance is important in developing sound risk management, as boards take a major role in defining and determining the risk profile of financial institutions. In the U.S. financial crisis, it is clear that boards of a number of major financial institutions failed to carry out that role.[118] As potential antidotes, the board needs to formulate a sound risk management strategy, including a decision on the extent of a firm's involvement in complex financial instruments as well as designing appropriate risk management strategies. In doing that, the

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[115] *See* Acharya and Richardson, *supra* note 54. *See also* Laker, *supra* note 61.
[116] *See* Acharya and Richardson, *supra* note 54.
[117] *Id.*
[118] *Id.*

board needs to integrate risk management with the overall corporate growth strategy.[119] In addition, the board should oversee regular stress testing to determine the firm's liquidity and capital needs.

## VI. THE ASIAN FINANCIAL CRISIS IN LIGHT OF THE AMERICAN FINANCIAL CRISIS

Even though the current global financial crisis is still evolving, several preliminary lessons may be drawn at this juncture. The first lesson is that financial crises can originate in developed economies as in emerging markets. The current US financial crisis is largely facilitated by an expansion of domestic credit and financial innovation.[120] In contrast, the Asian financial crisis was deepened by shallow domestic financial markets, which had pushed the Asian firms and banks to seek external financing.[121] Both the U.S. in 2007 and emerging Asia in 1997 had significant current account deficits and a declining international competitiveness, but these only turned out critical for Asia that maintained fixed exchange rates and not so for the U.S. given the seigniorage of the US dollar as an international reserve currency and solid credit reputation of U.S. government despite large external debt accumulations. However, in both contexts, the excessive leverage-financed expansions were the fundamental reason that led to the financial crisis.[122]

A second lesson is that the deficient and fragmented regulatory and supervisory systems in the U.S. contributed to the excessive leverage that fueled the current U.S. crisis. The Securities and Exchange Commission approved the debt-to-equity ratio of major investment banks to go up from approximately 10:1 to 40:1 in 1994, and the repeal of the Glass-Steagall Act removed the Chinese wall between commercial and investment banks and insurance companies in 1999 while the supervisory authorities were still fragmented along the old industry lines.[123] This contrasts with the Asian financial crisis (and other emerging market crises) where the primary reason was the lack of trust by international investors in the sustainability of the countries' macrofinancial policies.[124]

A third lesson is that the seriousness of a crisis in terms of its adverse impacts may necessitate unconventional as well as conventional monetary and fiscal policy measures to effectively deal with the crisis. It is interesting that while the initial symptoms (collapse of financial institutions) and fundamental reasons (excessive leverage) are the same, the macroeconomic policies undertaken in the U.S. now and Asia then are diametrically opposed

[119] *Id.*
[120] See *supra* notes 57 and 58.
[121] Choi, *supra* note 11, at 7.
[122] *See* Choi & Papaioannou, *supra* note 6, at 14.
[123] Id.
[124] *Id.* at 121 and 122.

to each other.[125] The U.S. government is engaging in monetary policy easing and expansionary fiscal policies, while the Asian governments during their crisis were forced to undertake tight monetary and fiscal policies imposed by the IMF.[126] The implication is that two opposite policy measures, if well designed and executed, could work to cope with financial crises in different institutional and market settings.

As we are going forward, the current crisis revealed various regulatory shortcomings both at the national and global level, as well as several inadequacies regarding the financial crisis management and resolution framework, that need to be addressed. Among these issues are the design of international financial support mechanisms for systemically important financial institutions and financial systems with an objective of establishing a clear process for coordinating management and resolution authorities regarding global financial risk, and the adoption of international accounting standards for financial institutions at times of serious financial distress that minimize arbitrary and non-transparent assessments of troubled assets and institutions.[127]

Further, no other crisis than the current U.S. financial crisis has elicited such an extensive battery of public intervention measures globally since the Great Depression. From the outset, it became evident that the taming the crisis would require a political will at the country level for a swift design and effective implementation of comprehensive response strategies. Critical in the development of this strategy is a balance between a swift implementation of such strategies and the control of moral hazard problems arising from the shift of risks from shareholders and creditors of specific financial institutions to the sovereign governments or international institutions. Whether this balance was upheld in policy measures taken during the current U.S. financial issue, as well as during the Asian financial crisis, is an open issue.

In retrospect, the Asian financial crisis highlighted the importance of: (1) a sound macroeconomic policy framework, and the dangers of unsustainable large current account deficits; (2) fuller disclosure of all relevant and reliable economic and financial data on a timely basis; (3) financial sector reform, including better regulation and supervision; and (4) promotion of good governance, with enhancement of the accountability and transparency of fiscal accounts as its key feature.[128] These lessons from the Asian crisis have certainly helped shape the policies undertaken during the current U.S. financial crisis. However, the failings that led to the U.S. crisis raise the question of whether the factors that led to the Asian crisis were well-understood and properly addressed globally, and whether they pose a new challenge for drawing new lessons from the U.S. financial crisis.

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[125] *See* Choi & Papaioannou, *supra* note 6 at p. 15.
[126] *See* James W. Dean, WHICH FAILED: ASIAN CAPITALISM OR INTERNATIONAL CAPITAL MARKETS? (2001). *See also* Choi, *supra* note 11.
[127] *See* Choi & Papaioannou, *supra* note 6, at 15.
[128] *Id.*

## VII. Conclusion

In comparing and contrasting the Asian and U.S. financial crises, we can summarize the main similarities and differences with respect to their causes, responses and implications as follows:

(1) Both crises are partially caused by excessive leverage. However, the Asian crisis has more basic real sector reasons, while the U.S. crisis originated in the mortgage and financial sector;

(2) Part of the reasons for the Asian financial crisis was the underdevelopment of domestic financial market infrastructure, while the U.S. crisis is partly due to the overdeveloped financial innovations. However, in both cases, the failure of risk management aggregated the problems;

(3) Government policies after the crisis were almost the opposite of each other – tight monetary and fiscal policies in Asia and easy monetary and fiscal policies in the U.S. However, both might make sense given the different economic situations, i.e., uncertainty about the sovereign risk for the Asian government, but not so for the U.S., and greater and global implications of the U.S. crisis;

(4) Both crises have moral hazard problems, albeit in a different context. However, excess compensation and incentive misalignment appears to be the major problem for the U.S., but not in Asia;

(5) Asia fared better in the current global financial crisis partly because of the major reforms undertaken since the Asian financial crisis; and

(6) Many of the reforms undertaken in Asia in the aftermath of its crisis, as well as policy responses, have implications for the current debate for the regulatory reform in the U.S.

In the Asian financial crisis, the redesigning and reforming economic and financial systems to effectively address large capital flows and to manage the associated risks proved to be major challenges for regulators and policymakers. In response to the strong capital inflows and liquidity, banks had overextended in leverage and lending, which gave rise to asset price bubbles and overvalued currencies. In the current U.S. crisis, the Fed's low interest rate policy as well as capital inflows from abroad also created an abundance of liquidity and led banks to be lax in their lending policies, resulting in the real-estate boom and sub-prime mortgage crisis. Going forward, to prevent such bubbles and consequent crises, it is imperative that the risk management of financial institutions continue to be strengthened and regulators be prepared to use macro-prudential measures proactively to reduce systemic risk. This implies that credit standards and bank capital rules remain vigilant regardless of market conditions.

# APPENDIX

## Corporate and Financial Reforms in Korea in the aftermath of the Asian Financial Crisis

| Announcement Date | Contents | Area |
|---|---|---|
| 10/28/1997 | Foreign exchange regulation has been relaxed to facilitate foreign fund inflows. | Foreign exchange |
| 11/25/1997 | This law gives the Bank of Korea more independency over monetary policy decision and execution. | Monetary policy |
| 11/25/1997 | The government agency provides deposit insurance for the full amount of bank deposits, effective for deposits for the period from 11/19/1997 to 12/31/2000. | Deposit Insurance |
| 12/10/1997 | Stock market was opened to foreign investors more broadly. The total foreign ownership of a listed firm increased to 50%, and the limit for an individual foreigner investor increased to 7%. | Capital markets |
| 12/16/1997 | The floating exchange rate was adopted. | Foreign exchange |
| 1/18/1998 | Corporations with assets of more than 7 billion won are mandated to hire external auditors registered with the government. | Auditing |
| 2/1/1998 | Listed corporations must have at least one outside independent director or at least one-fourth of the number of directors in the board must be outside independent directors. | Corporate governance |
| 2/1/1998 | Regulation limiting internal investments within the business groups was suspended during the period of February 1998 to March 2001. | Fair Trading |
| 2/15/1998 | Regulations on mergers and acquisitions by foreign investors are eased. | Capital markets |
| 2/24/1998 | As per the recommendation of the World Bank, three laws pertaining to corporate bankruptcy was enacted: liquidation, bankruptcy, and reorganization. This law has been amended once in 1999. | Corporate bankruptcy |

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|---|---|---|
| 3/1/1998 | Foreign investors are permitted to create funds to purchase bond or stocks for arbitrage purposes, with special tax benefits. This is designed to provide liquidity to troubled Korean firms. | Capital markets |
| 5/16/1998 | Limits on foreign investor in stock trading were abolished. | Capital markets |
| 6/1/1998 | Government announced a two-step Foreign Exchange Liberalization plan. The first step is to simplify foreign exchange transactions, and the second is to remove most regulations on foreign exchange transactions. | Foreign exchange |
| 1/2/1999 | The Financial Supervisory Service was established by consolidating four existing supervisory bodies (Banking Supervisory Authority, Securities Supervisory Board, Insurance Supervisory Board, and Non-bank Supervisory Authority) into a single supervisory body. It is subject to oversight by the Financial Services Commission, and shares some responsibility with the Securities and Futures Commission. | Financial Supervision |
| 2/1/1999 | Foreign investors can establish vulture funds to buy troubled firms for restructuring and subsequent sale for profit. | Capital markets |
| 4/1/1999 | The first step of the Foreign Exchange Liberalization Plan regarding the simplification of foreign exchange transactions becomes effective. | Foreign exchange |
| 1/1/2000 | This amendment mandates that publicly traded large firms (asset more than 200 billion won) have at least one outside independent directors or that number of outside independent directors be more than half of the number of directors in the board. | Corporate governance |
| 7/27/2000 | The Korean Accounting Standard Board was established to create accounting standards for Korean firms. | Accounting |
| 10/1/2000 | Securities of trouble companies can be pooled to facilitate sales. | Corporate Restructuring |
| 10/13/2000 | Financial holding companies are allowed to own more than one financial institution. By this law, existing financial institutions can become financial holding companies. | Financial Holding Company |
| 1/1/2001 | The second step of the Foreign Exchange Liberalization Plan regarding further relaxation of foreign exchange transactions becomes effective. | Foreign exchange |
| 8/14/2001 | Corporate restructuring law (effective from 8/14/2001 to 12/31/2010) is enacted to provide greater transparency of firms, to enable financial institutions to better monitor borrowing firms, and to restructure troubled firms with market mechanisms. This law defines the role of financial | Corporate Restructuring |

institutions during the corporate restructuring process and revises procedures concerning corporate restructuring.

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Unless noted otherwise, the announcement date is also the effective date.

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