SYMPOSIUM ON BUILDING THE FINANCIAL SYSTEM OF THE 21ST CENTURY:

AN AGENDA FOR CHINA AND THE UNITED STATES
SHANGHAI, CHINA • SEPTEMBER 5-7, 2008

FRIDAY, SEPTEMBER 5

6:00-6:30  Cocktail Reception - ZIJIN HALL, 1st floor of the Protocol Court

6:30-6:40  GREETINGS - ZIJIN HALL, 1st floor of the Protocol Court
Lu Mai, Secretary-General, China Development Research Foundation (CDRF)
Hal S. Scott, Nomura Professor and Director, Program on International Financial Systems, Harvard Law School

6:40-7:30  KEYNOTE ADDRESS - ZIJIN HALL, 1st floor of the Protocol Court
GUO Shuqing, Chairman, China Construction Bank
Introduced by: Levin ZHU, President, China International Capital Corporation Ltd.
Ambassador Alan F. Holmer, Special Envoy for China and the Strategic Economic Dialogue, U.S. Department of Treasury (pre-recorded video)
Q & A by:  David P. Loevinger, Minister-Counselor for Financial Affairs, Embassy of the United States of America, Beijing

7:30-9:00  Dinner - ZIJIN HALL, 1st floor of the Protocol Court

9:00-11:00  After-Dinner Cocktail - 3rd floor of Guest-Greeting Court

SATURDAY, SEPTEMBER 6

7:30-8:15  Breakfast Buffet - 1st and 3rd floor of the Guest-Greeting Court
Breakfast Meeting of Panelists, Reporters, and Facilitators (Please sit at the reserved tables on the 3rd floor of the Guest-Greeting Court)

8:30-8:35  WELCOME & OPENING REMARKS - YULAN HALL, 2nd floor of the Protocol Court
ZHANG Yutai, Minister, the Development Research Center (DRC) of the State Council, China

8:35-9:30  PANEL SESSION - YULAN HALL, 2nd floor of the Protocol Court
Topic 1: Turmoil in the Financial Markets
China Panelist: ZHU Xiaohuang, Vice President, China Construction Bank
China Panelist: HA Jiming, Chief Economist, China International Capital Corporation
U.S. Panelist: Catherine R. Kinney, Group Executive Vice President & Head of Global Listings, NYSE Euronext
U.S. Panelist: Stephen S. Roach, Chairman, Morgan Stanley Asia

9:30-9:45  Refreshment Break
9:45-11:25  **SMALL GROUP SESSIONS**

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11:30-1:00  Lunch - ZIJIN HALL, 1st floor of the Protocol Court

**KEYNOTE ADDRESS**

LI Jiange, Chairman, China International Capital Corporation

*Introduced by:* Jesse WANG, Vice President & CRO, China Investment Corporation
Richard Kramlich, General Partner/Co-Founder, New Enterprise Associates

1:10-1:30  **PANEL SESSION** – YULAN HALL, 2nd floor of the Protocol Court

**Topic 2: Issues in Public Sector and Private Sector Investments: Sovereign Wealth Funds, QDII, Private Equity**

China Panelist:  HU Ruyin, Director, Research Center, Shanghai Stock Exchange

U.S. Panelist:  Seiichi Fukuyama, BlackRock (Hong Kong) Limited

1:30-3:00  **SMALL GROUP SESSIONS**

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3:00-6:00  Reporters Meeting - PUJIANG HALL, 4th floor of the Guest-Greeting Court

3:00-5:50  Free Time

3:10  DONGJIAO State Guest Hotel guided garden tour – Meet at entrance of the Guest-Greeting Court

5:50  Shuttle to the Pudong Shangri-La Hotel – Meet in front of the Guest-Greeting Court

6:30-7:00  Cocktail Reception - The Grand Ballroom, 3rd floor, Pudong-Shangri-La

7:00-7:20  **KEYNOTE ADDRESS** - The Grand Ballroom, 3rd floor, Pudong-Shangri-La

HAN Zheng, Mayor, Shanghai Municipal Government

*Introduced by:* JIANG Ping, Secretary General, Shanghai Municipal Government

7:20-9:30  Dinner - The Grand Ballroom, 3rd floor, Pudong-Shangri-La

9:30  Shuttle to Dongjiao State Guest Hotel – Meet outside the lobby of Shangri-La Hotel

10:00-11:00  After-Dinner Cocktails - 3rd floor of the Guest-Greeting Court, Dongjiao Hotel
Sunday, September 7

7:30-8:15  Breakfast Buffet – 1st and 3rd floor of the Guest-Greeting Court
Breakfast Meeting of Chairs and Reporters (Please sit at the reserved tables on the 3rd floor of the Guest-Greeting Court)

8:30-9:50  Presentation & Discussion - YULAN HALL, 2nd floor of the Protocol Court
Topic 1: Turmoil in the Financial Markets
China Chair: ZHU Congjiu, Assistant Chairman; CSRC
U.S. Chair: Norman Sze, Managing Partner; China Consulting, Deloitte Consulting (Shanghai) Co. Ltd.

9:50-10:05  Refreshment Break

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Topic 2: Issues in Public Sector and Private Sector Investments: Sovereign Wealth Funds, QDII, Private Equity
China Chair: ZHANG Tao, Director-General, Statistics and Analysis Dept., People’s Bank of China
U.S. Chair: Elaine La Roche, Vice Chairman, JPMorgan Securities, China

11:15-11:20  Closing Remarks by FANG Xinghai, Director-General, Financial Service Office, Shanghai Municipal Government

11:15-1:00  Closing Lunch - ZIJIN HALL, 1st floor of the Protocol Court

1:00  Shuttle bus to Pudong International Airport - Meet in front of the Guest-Greeting Court
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U.S. Chair: Elaine La Roche, Vice Chairman, JPMorgan Securities, China

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      Guest-Greeting Court
C. Christopher Alberti  Principal, Colony Capital Asia Pacific Pte. Ltd., U.S.
Dean Arkema  Economic Officer, Consulate General of the United States of America, U.S.
David L. Asher  Chief Global Strategist, Medley Capital LLC, U.S.
Joseph Bae  Managing Partner, Kohlberg Kravis Roberts & Co., Asia (KKR), U.S.
William F. Barron  Partner, Davis Polk & Wardwell, U.S.
Bryan Boches  Principal, Medley Capital LLC, U.S.
Rick Carew  Financial Analyst, Dow Jones & Co., U.S.
Howard Chao  Partner, O’Melveny & Myers, U.S.
Donghao Chen  Director, Legal Dept. Ministry of Finance, China
Min Chen  Chairwoman, Fullgoal Fund Management Co., Ltd., China
Ru Chen  Chief Executive officer, Bank of China Investment Management, China
Xuebin Chen  Vice Dean, Institute for Financial Studies, Fudan University, China
Robert Chu  Partner, Sullivan & Cromwell LLP, U.S.
Michael DeSombre  Partner, Sullivan & Cromwell LLP, U.S.
Guorong Ding  Chairman, Shenyin & Wanguo Securities Co., Ltd., China
Wei Ding  Executive Chairman of Corporate Finance Committee, Head of Investment Banking Department, Managing Director, China International Capital Corporation Ltd., China
Yifan Ding  Deputy Director, Institute of World Development, Development Research Center of the State Council, China
Dorothy Y. Dong  Managing Director and Chief Investment Officer, Starr International Company (Asia) Ltd., China
Jin Fang  Associate Research Fellow, Development Research Center, State Council of China, China
Xinghai Fang  Director-general, Financial Service Office, Shanghai Municipal Government, China
Seiichi Fukuyama  Vice Chairman, Asia Region, BlackRock (Hong Kong) Limited, U.S.
Jun Ge  Assistant President, China Europe International Business School (CEIBS), China
Simon Gleave  Partner, KPMG, China
William W. Grimes  Associate Professor & Associate Chair, Department of International Relations, Boston University, U.S.
Shuqing Gou  Chairman, China Construction Bank, China
Jiming Ha  Chief Economist, China International Capital Corporation Ltd., China
Zheng Han  Mayor, Shanghai Municipal Government, China
Zhiguang He  General Manager, Tai Ping Life Insurance Co., Ltd., China
Jeffrey Hine  Chief Operating Officer, CCB Financial Leasing Corporation Ltd, U.S.
Kim Hong  President, Bank of America, Asia Pacific, U.S.
Austin Hu  Chief Representative, Beijing Representative Office, Goldman Sachs International Bank, China
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Changmiao Hu  General Manager, Public Relation & Corporate Culture Department, China Construction Bank, China
Karen Hu  Director of CA & CSR Department, AIG General Insurance Company China Ltd., China
Yanchao Hu  Deputy Director-General, Fujian Office, China Banking Regulatory Commission, China
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Huiling Huang  Macroanalyst, Wellington Global Investment Management Ltd., U.S.
Jie Huang  Citibank, China
Yiping Huang  Managing Director, Asia-Pacific chief economist, Citygroup Inc., China
Sun Jie  Managing Director, Head of Global Markets Group-China, Bank of America Securities Asia Limited, U.S.
Ping Jiang  Secretary-General, Municipal Government of Shanghai, China
Zhuoqing Jiang  Deputy Secretary-General, Municipal Government of Shanghai, China
Luo Jin  Deputy Director-General, International Department, People’s Bank of China, China
Donald P. Kanak  Chairman, Prudential Corporation Asia, U.S.
Catherine R. Kinney  Group Executive Vice President & Head of Global Listings, NYSE Euronext, U.S.
Alok Kochhar  Managing Director & Head of Financial Institutions, Bank of America Asia, U.S.
Richard Kramlich  General Partner/Co-Founder, New Enterprise Associates, U.S.
Arthur Kroeber  Managing Director, Dragonomics Research & Advisory, U.S.
Vivian Lai  Partner, Oliver Wyman, U.S.
K.C. Lam  Director, FX Product Asia, Chicago Mercantile Exchange Group, U.S.
Elaine La Roche  Vice Chairman, JPMorgan Securities, China, U.S.
Nicholas Lardy  Senior Fellow, Peterson Institute for International Economics, U.S.
Harvey Lau  Partner, Baker & McKenzie, U.S.
Edan Lee  Managing Director, Olympus Capital Holdings Asia, U.S.
Robin Lewis  Chief Representative in China, Fairfield Greenwich Group, U.S.
Susan Li  Managing Director, Head of Strategy Coordinating Committee, Vice Chairman of Corporate Finance Committee, China International Capital Corporation Ltd., China
Jiange Li  Chairman of China International Capital Corporation, Ltd., Vice Chairman of Central SAFE, China
Ruishan Li  Acting General Manager, International Department, Agricultural Bank of China, China
Tao Li  Deputy General Manager, Tai Ping Life Insurance Co., Ltd., China
Andy Lin  CEO, China Universal Asset Management Co., Ltd., China
John Lin  President and CEO, Starr International Company(Asia) Ltd., China
Wendy Lin  Chief Representative, AIG Beijing Representative Office, China
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Chunhang Liu  Director-General, Statistics Dept., China Banking Regulatory Commission (CBRC), China
Dora Liu  Partner; China GFSI Practice Leader, Deloitte Touche Tohmatsu CPA Ltd, U.S.
Ning Liu  Deputy Director-General, Financial Service Office, Tianjin Municipal Government, China
Xiangmin Liu  Legal Advisor, National Council on Social Security Fund, China
Xinyi Liu  Executive Vice President, Shanghai Pudong Development Bank, China
David P. Loevinger  Minister-Counselor for Financial Affairs, Embassy of the United States of America, Beijing, U.S.
Guoqiang Long  Deputy Director General, Development Research Center of the State Council, China
Walter A. Looney  Partner, Simpson Thacher & Bartlett LLP, U.S.
Bill Lu  Portfolio Manager, Tudor Investment Corporation, U.S.
Huayu Lu  CEO, Bank of Ningbo, China
Mai Lu  Secretary General, China Development Research Foundation, China
Richard Lung  Vice President/Senior Analyst, Moody's Investors Service, U.S.
MA, Hong  Deputy Director-general, Financial Service Office, Shanghai Municipal Government, China
Sharon Mann  Partner, Reed Smith, U.S.
Barry Metzger  Partner, Baker & McKenzie LLP, U.S.
Arthur M. Mitchell III  Senior Counsel, White & Case LLP, U.S.
Filip Moerman  Partner, Cleary Gottlieb Steen & Hamilton LLP, U.S.
Satoru Murase  Partner, Bingham McCutchen Murase LLP, U.S.
Jack Murphy  Partner, Cleary Gottlieb Steen & Hamilton LLP, U.S.
Keith Noyes  Asia Pacific Regional Director, International Swaps and Derivatives Association, Inc., U.S.
Kathleen M. O'Day  Deputy General Counsel, Board of Governors Federal Reserve System, U.S.
Mark O'Friel  Managing Director, Steel Partners Japan G.K., U.S.
Zhaolun Ou  CEO, Citibank, China
Changhong Pei  Director, Institute of Finance and Trade Economics, Chinese Academy of Social Sciences, China
David Peng  Managing Director and Chief Representative, BlackRock Investment Management (UK) Ltd, Beijing
William J. Powell, Jr.  Chief China Representative, TIME Inc., U.S.
Jin Qiu  Managing Director, Head of Research Department, China International Capital Corporation Ltd., China
Robin Radin  Associate Director, Program on International Financial Systems, Harvard Law School, U.S.
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Henny Sender Financial Analyst, The Pearson Group, U.S.
Todd Shaw Head of Human Resources Asia, Bank of America, U.S.
Bingxi Shen Deputy Director-General, People’s Bank of China, China
Catherine Simmons Vice President, Regulatory and Government Relations, Asia, State Street Bank and Trust, U.S.
Jeffrey Small Partner, Davis Polk & Wardwell, U.S.
David Stoughton Senior Vice President, Asia Card Executive, Bank of America, U.S.
Jie Sun Senior Vice President (China Affairs), Securities and Futures Commission, Hong Kong, China
Norman Sze Managing Partner; China Consulting, Deloitte Consulting (Shanghai) Co. Ltd., U.S.
Min Tang Deputy secretary, China Development Research Foundation, China
Jeff Tao Partner, Deloitte Global Finance Industry, U.S.
Guangshao Tu Vice Mayor, Shanghai Municipal Government, China
Marsha Vande Berg Chief Executive Officer, Pacific Pension Institute, U.S.
Marc Verissimo Chief Strategy Officer, SVB Financial Group, U.S.
Chris Wadsworth Executive Managing Director, Ceyuan Ventures, U.S.
Guanlong Wang Vice President and COO, Huatai Asset Management, China
Jesse Wang Executive Vice President and CRO, China Investment Corporation, China
Li (Jasmine) Wang Business Manager, Fairfield Greenwich (China), LLC, U.S.
Yuan Wang Director General, Education & Training Department, China Development Bank, China
Jinan Wei Deputy Director-General, Development Research Center of the State Council, China
J Weinstein Deputy Director, Program on International Financial Systems, Harvard Law School, U.S.
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SYMPOSIUM REPORT
Building the Financial System of the 21st Century:  
An Agenda for China and the U.S.  
Shanghai, China, September 5-7, 2007

The fifth annual China-U.S. Symposium was held in Shanghai, China in the midst of slowing global economic growth and a worsening of the U.S. financial crisis. Sessions addressed the current turmoil in U.S. and global financial markets and issues regarding investment by sovereign wealth funds and private pools of liquidity. Much of the discussion was animated by the ongoing events in the United States, on topics including the future course of the crisis, the ability of U.S. authorities to handle the crisis, lessons from the United States for China, and the potential role of Chinese financial actors in stabilizing the situation.
Session I
Turmoil in the Financial Markets

The turmoil in U.S. financial markets and the potential for greater global contagion was an issue of great concern to participants. Major topics of discussion in Session 1 included the root causes of the current crisis, its likely course, and the lessons to be drawn from it. Most participants cautioned against blaming specific financial products or strategies, since they felt that the crisis had multiple causes. Participants pointed to both regulatory and monetary policy lessons from the crisis.

The Nature of the Crisis: Multiple Causes

While there was a range of opinions expressed about the importance of various factors in causing the crisis, there was a clear consensus that it had emerged from multiple causes. Participants pointed to failures of monetary policy, regulation, risk management, and information as key causes of the crisis.

Risky Mortgage Loans

Participants agreed that at the heart of the crisis was a profusion of risky mortgage loans. The rapid growth of subprime lending and of overleveraged, complicated mortgages to unsophisticated borrowers was seen as setting up a wave of defaults when economic growth slowed and housing prices began to drop.

Various explanations were offered for why this phenomenon had occurred. Many participants emphasized the role of monetary policy, arguing that excess liquidity leads inevitably to the creation of asset bubbles. In this interpretation, the development of the subprime crisis should not have been a surprise. Indeed, some participants argued that U.S. growth for over a decade had been based on the creation of one bubble after another.

Even among those participants who focused on the role of monetary policy, there was a general agreement that easy money alone had not determined the form of the housing bubble or the course of the crisis. Many participants pointed to a combination of regulatory policies and financial industry practices as having encouraged excess lending in housing markets and having exacerbated the crisis. On the policy side, they noted that a variety of U.S. government policies sought to expand home ownership, including the existence (and minimal constraints on the growth) of government-sponsored enterprises (GSEs) that lowered interest rates for borrowers while simultaneously reducing risk for lenders. They also made note of the mortgage interest tax deduction, which provided incentives for home ownership over and above the effects of low interest rates and excessive faith in the upward trend of housing prices.

At the same time, there was a strong sense among many participants that financial institutions had misunderstood the characteristics and riskiness of new financial products and procedures. Not only had some of them been inappropriate for financially unsophisticated and lower-income borrowers (such as interest-only loans with variable rates), but the issuers and holders of debt had mistakenly believed that asset-backed securitization would reduce risk by dispersing it widely, without considering the possible effects of a widespread drop in housing prices and rise in defaults and foreclosures. More fundamentally, a number of participants argued that the originate-to-distribute model created significant adverse incentives for lenders and securitizers — all of whom believed that they were turning risk over to the next purchaser.
down the line – to feel less concern about the credit risk of the loans they were selling. As one participant put it, the model “amplified” risk rather than dispersing it.

*Risky Securitization*

These adverse incentives combined with a poor understanding of the risk characteristics of the new products. With a short track record and limited liquidity of complex derivatives products like CDOs and CDOs2, financial institutions relied on pricing models and credit ratings based on the underlying loans – albeit without necessarily doing due diligence on the quality of the data they were using. (The decline in lending standards for subprime borrowers as evidenced, for example, by non-documentation loans and the acceptance of falsified loan applications was not detected by credit rating agencies, securitizers, or downstream investors until quite late.) Credit rating agencies often competed for the business of CDO issuers, contributing both to the manipulation of products to satisfy models while also reducing the incentive to carry out due diligence on the actual lending and valuation practices of originators.

Many participants agreed that over reliance on credit rating agencies was also a problem. Investors should have demanded more information from issuers (and the regulators should have requested it) and then done their own analysis. Legal and accounting requirements compounded that overdependence, creating rigidities in the system and leading to automatic and widespread selling of holdings of assets once ratings began to drop. Models used to analyze mortgage pools were based on relatively limited data about default rates under less than benign circumstances and failed to take into account the possibility of highly correlated defaults and housing price drops across the board.

Participants identified a final aspect of the riskiness of securitization as the lack of liquidity of such products. Even if the credit rating agencies were getting credit risk of securitized products right, their models did not address market risk. The extremely high leverage ratios and mortgage-backed CDO exposure of many financial institutions, combined with the requirement of mark-to-market valuation, meant that once the price of some such products began to drop, financial institutions were forced to start selling and deleveraging. But the low liquidity of the products depressed prices, which in turn forced more selling, again due to mark-to-market rules; at a basic level, there was no floor price for securitized debt, because there was no consistent pricing mechanism.

Some participants expressed the view that mark-to-market had itself been a trigger for unnecessary dumping of these securities into markets, creating a self-fulfilling prophecy. Most, however, agreed that financial institutions should have been much more careful about loading their balance sheets with illiquid securities.

*Other Contributing Factors*

Participants cited three other sets of contributing factors. One was the sheer complexity of both the products and the risk management strategies that financial institutions employed to make use of them. Risk management systems were incapable of dealing with high leverage and complex debt instruments across a variety of units and jurisdictions, leaving boards and top executives of large financial institutions in the dark about the overall market and counterparty risk their institutions were facing. Participants stated that managers were also unaware of the extent to which the sheer scale of derivatives markets created mutual vulnerabilities through counterparty risk; once this became apparent, the loss of confidence in highly leveraged counterparties led to their being unable to access credit and becoming financially unsustainable.
Second, several participants faulted accounting standards. A complaint of some was mark-to-market, as already noted. Others pointed to the allowance of massive accumulation of off-balance sheet assets and liabilities by a number of financial institutions. When the crisis hit, institutions had to move many of these supposedly off-balance items back onto their books, often for reputational rather than legal reasons. Thus, these participants argued, the on vs. off balance sheet distinction, which was meant to sequester risk, proved to be illusory in many cases.

The third set of factors was regulatory failure. Most fundamentally, participants noted that some financial institutions had been able to become too big (such as GSEs) or important to fail (such as Bear Stearns). There was also a sense among many participants that regulators had fundamentally not understood the new financial products and had thus allowed the situation to run out of control. Finally, participants noted that the fragmentation of the U.S. financial regulatory system made effective overall supervision of financial institutions impossible. It was particularly difficult for the SEC, with limited experience or resources, to supervise large investment banks.

Duration and Intensity

A major topic of discussion at the Symposium was the likely duration and intensity of the current crisis. Many participants were pessimistic, arguing that the U.S. economy would take several years to work out the effects of a cascade of bubbles that had begun in equities in the late 1990s, then moved into property, and eventually had infiltrated not only the entire U.S. credit system but also global debt markets. Under this interpretation, it would be difficult to predict a speedy bottoming out of housing prices, which participants agreed would be a basic precondition for economic and financial recovery. One particular problem that was noted in this regard was that U.S. households had become deeply indebted even at 2006 or 2007 housing prices; with a substantial fall in their home equity, that indebtedness had increased even further, leading to a severe credit crunch even for creditworthy borrowers.

Pessimists noted the disappearance of confidence in U.S. (and to a lesser extent other) financial markets and institutions, which they predicted would lead to a continued parade of financial difficulties, takeovers, and failures. Many participants judged that major institutions were likely either to be attractive takeover targets for cash-rich institutions such as some foreign financial institutions and sovereign wealth funds or to be bailed out by the government. (Information about the U.S. government takeover of Fannie Mae and Freddie Mac began to appear midway through the conference.) Smaller financial institutions and regional banks, however, were seen as far less likely than major institutions to survive the crisis, and several participants predicted widespread failures among them.

Based on some indicators, it was argued by some participants that the current financial crisis was potentially the worst one since the Great Depression. Others disputed that characterization, however, noting the limited effects to date on the real economy, the proactive stance of the U.S. government and Federal Reserve, and the positive effects of foreign capital. Most participants seemed more comfortable comparing it to the stagflation of the 1970s, although a minority was more upbeat, predicting that resolute action by governments, central banks, and healthy financial institutions could recapitalize the system and lead to a relatively rapid bottoming out of asset prices.
Lessons and Needs
Participants drew a variety of lessons from the crisis, including both general ones and ones specific to the United States and China. There was no clear consensus on all the particulars, although participants generally agreed on principles of improving transparency and risk management, the need to ensure that financial institutions achieved and maintained comfortable capital cushions, and the need for better regulatory coordination within and between countries.

Transparency and Pricing
A basic lesson for many participants was the need to improve information throughout the market, including the need for greater transparency at all levels. A number of participants focused on improving disclosure of positions and composition of products by both issuers and investors. They suggested that if the true extent of leverage and exposure among institutions like Bear Stearns had been known, lenders and counterparties would have been more reluctant to do business with them and they would not have been able to become systemic threats.

Others were skeptical, asking whether more disclosure in and of itself would really have changed behavior significantly. These participants saw different aspects of transparency as more important. They argued that rather than requiring expanded release of data, regulators and markets should instead focus on transparency of process. For example, they noted that the lack of transparency about credit rating models or about the conflicts of interest that arose in the rating of mortgage derivatives significantly reduced the utility of the raw data that was disclosed.

Many participants argued that one important means of improving transparency and the utility of information disclosures would be more principles-based accounting. For example, while financial institutions generally conformed to the letter of the law in their accounting of off-balance sheet assets, in many cases those assets were functionally inseparable from items that remained on their balance sheet; in such a situation, adherence to inappropriate rules had the effect of subverting the principles on which they were supposed to be based.

In addition to operational transparency, many participants pointed to the need to promote better price discovery in derivative products. There was no clear consensus, however, on how that might be achieved. It was generally agreed that greater standardization, accompanied by trading on exchanges or at least the establishment of central clearing facilities would go a long way toward increasing liquidity and therefore creating meaningful market prices. Greater use of clearinghouses or exchanges for credit default swaps and other derivative products was seen to have the potential to significantly reduce systemic risk, particularly counterparty risk. However, a number of participants were skeptical that standardization would be feasible or even useful for all derivative products.

Capital Adequacy
One important issue raised by the crisis was the inadequacy of many financial institutions’ capital cushions, despite adherence to legal requirements. Several participants called for stricter rules on accounting of assets, liabilities, and capital, as they felt that quality of capital had been questionable in many cases, mark-to-model had proved problematic in liquidity crises, and attempts to move risky assets off-balance sheet had proved illusory. There was less discussion of Basel II or changing capital-asset ratios.

Discussion of capital adequacy also addressed the nearer-term question of how major financial institutions (particularly in the U.S.) could shore up their capital bases to prevent precipitous drops in stock price and to reassure lenders and counterparties of their basic health. A number of participants expressed concern that regulatory hurdles had made it extremely
difficult for private equity firms or Chinese investors (banks and CIC) to make major investments to recapitalize U.S. financial institutions (see Session 2 for discussion of implementation of the Bank Holding Company Act). They saw this as a problem not only because it violated principles of equal access, but also because they felt it was unwise to restrict access to the world’s largest pools of capital at a time that recapitalization was so badly needed by U.S. banks.

**Regulation**

Three general lessons were discussed. First, there was a consensus that national and global regulatory structures were in need of reform. Regulatory fragmentation in the U.S. was seen by many as an important factor in the genesis – and perhaps more importantly the resolution – of the crisis. Participants also called for better international coordination of regulation and supervision. This concern dovetailed with unhappiness on the part of a number of market participants about the complexity and high costs of compliance across jurisdictions and functions.

Second, while accepting that significant new regulation or reregulation would be inevitable, particularly in the U.S., participants expressed trepidation about whether the new rules would be excessively burdensome. In addition to worries about increased costs of compliance, they were concerned that short-term considerations about the need to appease political constituencies and stabilize markets would lead to rules that would stifle innovation and reduce financial institutions’ flexibility over the long term. Many felt that principles-based regulation would be a better way of resolving that dilemma than just creating more and stricter rules, but there was also a certain amount of pessimism that the U.S. system could accommodate principles-based regulation.

Finally, as already noted, much of the discussion revolved around prudential regulation of financial institutions, but some participants also raised the issue of consumer protection. Their concern was that vulnerable and unsophisticated borrowers had in many cases been persuaded to take on mortgage obligations that they could neither afford nor understand and that these borrowers were suffering unnecessarily. Despite some concerns that legitimate financial products might be restricted by expanded consumer protection regulation, these participants stressed that abusive lending practices had been an important contributor to the crisis and that the political and social effects of widespread foreclosure and repayment difficulties could not be ignored. Thus, they urged financial institutions to be supportive of some regulation.

**China and the U.S.: Learning from Each Other**

With the world’s most advanced financial system in crisis, many participants were eager to discuss the likely effects on the Chinese economy, as well as relevant lessons for Chinese financial authorities and financial institutions. Conversely, a number of participants argued that there were important lessons that the U.S. should learn from China. Discussions addressed both macroeconomic and financial policy issues.

A central macroeconomic concern was the extent to which turmoil in the U.S. and global financial markets would affect Chinese growth in coming years. It was widely agreed that U.S. demand would shrink considerably, as negative wealth effects and the credit squeeze would constrain households’ ability to consume. Several cited forecasts that this would noticeably slow Chinese economic growth, although China would continue to grow rapidly compared to other economies. As a partial solution to the likely downturn in exports, participants agreed that domestic consumption in China should increase considerably. This consensus picked up on a theme from previous Symposia that cited the extraordinarily low propensity to consume as an
ongoing structural problem in the Chinese economy. There was less consensus on how this might be achieved, with some participants expressing skepticism about the ability of government policy to change household consumption, especially in conditions of rapid economic change and high inequality. For other participants, the answer was seen to lie in increasing consumers’ access to credit.

A second macroeconomic issue raised by many participants was how to manage monetary policy to avoid bubbles. Participants agreed that a major cause of the U.S. property bubble (as in the technology bubble in the late 1990s) was excess liquidity. While easy money had appeared to create a uniquely benign investment climate, in retrospect many participants felt that U.S. monetary policy makers had been too sensitive to negative movements of capital markets and insufficiently attuned to the problem of asset bubbles. Some participants therefore called for the People’s Bank of China (PBOC) to act resolutely to address asset price inflation. Others countered, however, that central bankers are seldom in a position to judge whether asset price rises are sustainable and called for a more conservative approach focusing on prices of traded goods and services.

Several effects and lessons were also noted on the financial side. A number of participants suggested that the crisis would decrease Chinese demand for U.S. fixed income products, raising questions about where they might invest instead.

Others raised concerns about the development of securitization and other derivative products in Chinese financial markets. Most participants appeared to agree that the development of derivative products, including asset-backed securities, would be essential to the development of efficient financial markets in China. Several stated that the development of modern capital markets would be impossible without the ability to carry out short sales. Others pointed that it might be more appropriate to start with such basic building blocks as a corporate bond market.) Although product expansion was generally seen as positive, there were many participants who expressed the belief that the pace of expansion would or should be slower than previously anticipated. Some of these participants felt that slower expansion of products would be a good thing, as neither regulators nor potential investors or issuers were yet sophisticated enough to manage a rapid introduction. They hoped that one lesson that Chinese regulators would learn from the U.S. crisis was the danger of financial innovation without clear understanding of products’ risk characteristics. Others wished for a faster pace, but recognized the political difficulty of pursuing financial innovation while the U.S. crisis was still ongoing.

A final lesson noted for China by some participants was a positive one. They pointed out that despite widespread loss of confidence in financial institutions of all sorts in the U.S., there had been essentially no bank runs, due to the existence of substantial and credible deposit insurance. They urged Chinese financial authorities to significantly expand the deposit insurance regime to avoid bank runs on the one hand or an unfunded government obligation to bail out failed banks on the other.

Participants also considered whether China’s experiences in financial and macroeconomic management in recent years had any lessons for the U.S. A number of participants argued that, despite significant differences in circumstances and systems, there were at least two important lessons for the U.S.

First, a number of participants noted with approval the formal responsibility of the PBOC for financial stability in China. They argued that only a central bank is in a position to stabilize financial markets in a crisis of liquidity and confidence. Drawing partly from the Chinese
experience, they advocated that the Fed be given a clear mandate to be responsible for financial stability.

Second, they pointed to China’s financial regulatory structure as a much more rational one than the highly fragmented U.S. system. While lacking a unitary regulator, they pointed to the Chinese system as one in which each major sector of the financial industry has a single regulator, and thus financial institutions face coherent sets of regulations and deal with single regulators with clear lines of authority. In contrast, the U.S. system of overlapping regulators, supervisory functions, and reporting obligations was seen as not only dysfunctional, but also as having contributed both to the onset of the current crisis and to some of the difficulties of resolving it.
Session II

Issues in Public Sector and Private Sector Investments: Sovereign Wealth Funds, QDIIs, and Private Equity

Session 2 addressed issues of cross-border investment between China and the U.S., including investment into the U.S. by sovereign wealth funds and QDIIs and investment opportunities in China for U.S. private equity funds. Some of the discussion focused on the specific issue of investment into U.S. financial institutions, in connection with the ongoing financial turmoil addressed in Session 1. Participants agreed that governments should generally adhere to the principle of not discriminating against investors on the basis of their nationality, ownership, or capital structure.

Sovereign Wealth Funds

With the rapid recent expansion of sovereign wealth funds globally and the 2007 establishment of CIC, participants agreed that there was a new level of public and political attention to these bodies. Nonetheless, there was no clear consensus on how SWFs should be defined or what the utility of any given definition might be. While some participants suggested that any government-controlled trust fund that invests in overseas assets (including pension funds) could conceivably be considered an SWF, most rejected such a broad definition. Instead, they focused on government-controlled institutions whose primary mission is profit-oriented foreign direct investment. Several participants noted the recent agreement on principles for best practices agreed by major SWFs in Santiago, Chile only days before the Symposium; however, even the apparently authoritative definition of the Santiago Principles was dismissed by some as politically irrelevant.

The uncertainty over the proper definition and designation of SWFs resulted at least in part from doubts about the relevance of the category. Indeed, there appeared to be a very strong consensus that concerns over the behavior of sovereign wealth funds had no meaningful economic basis. Rather, the controversy was seen to be entirely political in nature, and participants agreed that even the political problem was an issue of public perception rather than any increase in host country vulnerability to or dependence on foreign governments. It was argued that any legitimate national security concerns could be addressed through existing laws and procedures, including CFIUS in the U.S. Moreover, the tendency of SWFs, including CIC, to take large but passive positions was seen to further reduce the likelihood that their investments would give them power over recipient economies or governments. And it was pointed out that one way or another economies with large surpluses would be increasing their holdings of foreign (especially U.S.) currency, whether in the form of direct investments, government bonds, or other assets. Some questioned, however, whether the political salience would have been lower were the Chinese government to loosen capital controls and allow private actors to make foreign investment decisions, instead of centralizing them in the state.

Despite the consensus that the problem of SWFs was one of public perception, there was also a widespread recognition that those perceptions must be addressed carefully. One reason for participants’ anxiety about the possibility of politically-inspired restrictions on SWFs was that many felt that SWFs had in fact played a very positive role in helping to stabilize the U.S. economy and financial institutions in the context of the current crisis. Thus, they emphasized the need to create mechanisms such as codes of best practice and transparency that could defuse public concerns about the intentions and effects of SWFs.
How Should SWFs Behave?

Turning to the question of how SWFs should in fact behave, participants touched on several different dimensions, including the need to reassure host countries, the practical difficulties of asset management, and the domestic political implications of SWFs’ investments. Participants agreed that all of these dimensions carried significant challenges.

Strategies to reassure host countries were in some ways seen as the most straightforward. Echoing the best practices principles agreed by major SWFs in Santiago, participants focused on transparency as the best antidote for political sensitivity. Discussion of the general concept of transparency focused on the need for a clear statement of investment purposes and strategy as well as full and prompt disclosure of holdings and fund activities. The low profile of many SWFs, including CIC, in terms of their investment strategies – for example, often taking significant equity stakes without voting rights – was also seen as addressing political sensitivities, although some participants felt that this meant that the playing field was tilted against the SWFs.

Asset management was seen to be a potentially enormous challenge for rapidly growing SWFs such as China’s. While some participants suggested that CIC’s lack of leverage and long time horizons would allow it to function without requiring its managers to master the most sophisticated hedging techniques, most agreed that long time horizons alone would not eliminate the basic problems of judging and tracking investments, or of managing risk across multiple currencies and industries. Many participants assumed that CIC would need to make heavy use of outside advisors and fund managers, but it remained unclear how such outsiders would be chosen or how their performance would be assessed. It was also generally agreed that China should seek to learn from the experiences of more established SWFs with good track records, such as Singapore’s.

The final challenge noted was domestic politics. At one level, there was considerable skepticism about the long-term ability of government investment funds to avoid political pressures, despite the professionalism of their current management. Moreover, a number of participants raised the question of how government credibility would be affected if a SWF were to make a number of bad investments and lose money for citizens. They noted that the CIC investment in Blackstone, for example, had already lost 40% of its value. For these reasons, some participants wondered whether the potential economic benefits of an SWF were worth the political costs for China.

Private Equity

While much of the discussion in Session 2 focused on sovereign wealth funds, participants also addressed issues for private equity at some length. (Venture capital received much less attention, although some of the same issues were seen to apply.) Among the current and future challenges they saw for private equity were problems of exit, regulation, and access to funds. Nonetheless, some participants felt that the basic business model of private equity firms would ensure that they would remain an important and profitable element in global finance. It was also suggested that private equity had the potential of being an extremely important source of large-scale, stable funds for restructuring the financial sector.

Participants saw the current dormancy of IPO markets in the U.S. and China as a significant problem for private equity firms operating in both countries. Compounding the weakness of IPO markets in China, it was noted that foreign firms no longer had the option of
turning to external markets, as the authorities had disallowed the technique of creating an offshore holding company as a listing vehicle.

**China**

In addition to the limited exit options for private equity and venture capital, participants pointed to a number of other regulatory or structural impediments in the two countries. For China, they especially noted significant formal regulatory obstacles, for example arbitrary decision making regarding licenses for both initiating and exiting equity positions. Some participants also argued that the pool of experienced managers from which private equity firms could choose executives remained limited. Finally, there was a broad consensus that Chinese investors had not yet reached a level of knowledge and sophistication that would make IPOs a viable exit option for a broad range of corporate turnarounds.

With regard to Chinese private equity firms, participants agreed that the sector was undeveloped. In many cases, it was observed, they might better be classified as asset managers or venture capitalists, with few taking long-term positions in turning around undervalued firms. Another challenge noted was the undeveloped nature of the legal environment for private equity. Due to the lack of a legal category of a “fund,” most private equity was said to be organized on the basis of LLCs.

**U.S.**

For the U.S., two major impediments were noted, both related to regulation. First, some participants pointed to exposure to class-action lawsuits, in addition to what some considered excessive regulation – as major disincentives to listing in the U.S. A second issue raised, which was specific to banking, was that the Bank Holding Company Act made it unviable for most private equity firms to participate in the restructuring of the U.S. banking sector. The particular rule that has restricted entry by private equity is that any company that has effective "control" of a U.S. bank must submit to regulation as a bank holding company; any stake above 10% (and to a lesser extent 5%) would run into significant regulatory compliance issues. While the Federal Reserve had relaxed the application of the rule to SWFs, the rule still limited the potential role of SWFs in resolving the financial crisis.

There were also debates about the long-term viability of private equity as a model of corporate governance. On one side of the debate were those participants who believed that private equity's rapid expansion over recent years could be explained primarily by the easy availability of cheap money. With money no longer cheap or easy to obtain, they saw it as inevitable that returns would be lower and so private equity firms would be forced to scale back their activities considerably. Other participants felt that such pessimism was unwarranted. Some argued that the basic business model of private equity was superior to other forms of ownership. Others pointed out that the rapid decline in asset prices provided opportunities to obtain adequate returns even for much less leveraged projects.

**QDII**

The final topic addressed in Session 2, albeit at less length than SWFs and private equity, was Qualified Domestic Institutional Investors (QDIIs). While these vehicles were created to allow Chinese domestic retail investors limited access to overseas markets, it was noted that they had not become particularly popular with actual investors. A major reason was seen to be the poor performance of the limited number of QDIIs that had gotten started.

Despite the poor track record to date, a number of participants agreed that QDIIs could still play a constructive – and perhaps even significant role – in the longer term liberalization of
Chinese capital markets. Many participants agreed that investors, fund companies, and regulators would benefit from gradual exposure to international investing, which would offer opportunities to learn by doing, while limiting short-term negative impacts on investors. They emphasized, however, that part of the learning process would necessarily involve much more investor education, as there was a general agreement that many investors in QDIIs to date had not fully understood the nature of the investments they were taking or the attendant risks. Several participants stressed that this was not a problem only for QDIIs, but for financial investment in general. They argued that the sheer newness of Chinese financial markets, combined with the extremely rapid increases in inexperienced investors called for much more proactive efforts at investor education by both financial authorities and financial institutions.

A final concern was that in some cases QDIIs had been characterized by abusive selling practices and poor management. Participants warned that regulators would need to curb such practices in order to regain the confidence of investors.
PRESENTATION OF FINAL PLENARY SESSION
Session I

Turmoil in the Financial Markets
The Nature of the Crisis: Multiple Causes

- Risky Mortgage Loans
  - Easy money (excess liquidity)—monetary policy
  - Policies promoting home ownership, e.g. GSEs and tax deductions
  - New financial products: e.g. interest only loans
  - Lack of proper risk management and incentives (originate-to-distribute model)
- Risky Securitization
  - New financial products: CDOs and CDOs2
  - Over dependence on credit ratings
  - Accounting: fair market value and consolidation rules
  - Lack of pricing mechanism for securitized debt
- General
  - Complexity
  - Regulatory failure: structure, scope, and enforcement

Duration and Intensity

- Multiple and cascading bubbles: property, credit (all debt markets)
- Not short term—multiple years, will get worse
- Significant number of regional bank failures
- Worst financial crisis since depression?
- Future bailouts (press report on GSEs)?
Lessons and Needs

- Transparency: better disclosure by issuers, investors (banks holding mortgages or MBS), and rating agencies
- Improved risk management
- More capital
  - From China: facilitated by recent Fed exemption of CIC from Bank Holding Company Act
  - From PE: still regulatory obstacles
- Better capital adequacy rules
- Better consumer protection policies
- Standardized securitization instruments traded on exchanges: promotes price discovery
- Reduce systemic risk (avoid the moral hazard of bailouts) e.g. by use of clearinghouses or exchanges for credit default swaps
- Better regulatory structure: national/global

Special Lessons for China

- Decrease in exports to U.S. reinforces need to increase Chinese consumption (but how?)
- Better monetary policy to avoid bubbles
- Less appetite for U.S. fixed income products?
- Still need securitization, but with more caution?
- Need for deposit insurance to avoid bank runs
Lessons for U.S. from China

- Fed should be responsible for financial stability, like Peoples Bank of China
- More integrated regulatory structure
- More rational and coordinated government policy

Session II

Issues in Public Sector and Private Sector Investments: Sovereign Wealth Funds, QDII, Private Equity
Sovereign Wealth Funds (SWFs)

- What is an SWF and why do we care how it is defined? No consensus
- Overall consensus: positive factor, e.g. help to alleviate U.S. financial crisis
- Is only legitimate concern national security? Is this dealt with by more transparency?
- What should SWFs invest in and how?
  - Need for advisors
  - Need for integrated risk management
  - Possible negative impact on sovereigns of making bad investments

Private Equity—Exits

- U.S. exits: generally dormant U.S. IPO market plus too much regulation and exposure to securities class actions
- Chinese exits: dormant IPO market, and inability of foreign private equity to create an offshore holding company as a listing vehicle (this “technique” now closed)
Private Equity Impediments

- U.S.: Bank Holding Company Act provides that a company with effective “control” is regulated—unacceptable to potential private equity investors in banks
  - Per se ok under 5%
  - Control determined by multi factor test between 5%-9.9%
  - Harder test over 10%
- Chinese issues:
  - Multiple regulatory obstacles
  - Lack of management capability
  - Lack of investor knowledge

Future of Private Equity

- Will less leverage lead to less private equity?
  - Yes: lower returns
  - No: better management model, and can obtain adequate returns through low prices of asset acquisitions
QDII

- Vehicle to allow Chinese domestic retail investors to invest in foreign assets
- Poor performance but remains important method for liberalizing investment opportunities
- Need more education for investors and control of abusive selling practices

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APPENDIX I

CONCEPT PAPERS
Impact of Wenchuan’s Post-Earthquake Reconstruction on China’s Inflation and the Countermeasure of RMB Appreciation—
A Simulation Analysis Based on the AD-AS Framework
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(Financial Institute of Fudan University, Shanghai)

Abstract: On the basis of AD-AS framework, econometric models are constructed to analyze the impacts of the reconstruction after the Wenchuan Earthquake and RMB appreciation on aggregate demand and supply while related impacts are simulated on domestic inflation. Some policy implications are obtained from the analysis: reconstruction after the Wenchuan earthquake could be a chance to speed up moderate RMB appreciation to control the cost-pushed and demand-pulled inflation, which also can offset negative shocks of decrease of exports, and avoid the stagnation of China’s Economy.

I. Current situation of inflation and Predicament of policy options in China

In recent years, Chinese macro-economy has been facing two major issues: double favorable balance in international payments and ever-increasing pressure of inflation. Now the priority of Chinese macro-economic control is to curb the worsening inflation (Yi Gang, 2008). From the beginning of 2007, the inflation pressure has been mounting gradually with rising CPI which hit 8.7% in Feb. 2008, a record high over the past decade. All these indicate that Chinese economy has possibly come to the peak of this round of economic cycle.

A. The basic characteristics of current inflation

(a) China’s rising price after 2007 can be initially interpreted as the structural rise of CPI, mainly influenced by rising food prices (See Figure 1). In 2007, Chinese CPI increased by 4.8%, and food prices by 12.3%. Deducted the factor of food price, CPI only increased by 1%. What is worth noting is that, what pushes forward food prices are both accidental factors (such as blue-ear disease of pigs and natural disasters) and inevitable factors. To be specific, inevitable factors include, on the one hand, mass migration of surplus rural labor forces, increasing income of rural households, and significant decrease of peasants’ willingness of planting grains and cultivating livestock, and on the other hand, rising demand for daily necessities such as agricultural products driven by the urbanization of rural labor force and increasing salaries. In addition, food price hike on a global scale should also be taken into consideration.

Figure 1: Structural analysis on China’s CPI increase over the same period
(b) Obviously China’s price hike has worsened from structural inflation to overall inflation, transmitted from consumer goods to raw materials and PPI as well as from upper-stream industries to down-stream industries (see Figure 2). Before Oct, 2007, PPI didn’t follow CPI to rise simultaneous, which served as a crucial argument for those who insisted that Chinese inflation was temporary and localized in nature. But after Oct. 2007, PPI has been soaring nearly as fast as CPI. An overall inflation began to emerge.

Figure 2: The change of Chinaese CPI and PPI in recent years

(c) This round of inflation has shifted from demand-pulled inflation characterized by structural imbalance to imported and cost-pushed inflation characterized by revaluation of major factor prices. At its early stage, Chinese inflation was pulled by demand because its deepening urbanization and increasing migration of rural labor forces into cities led to declining supply of pork, egg and other agricultural necessities and accordingly ever-increasing food price. In addition, the excessive liquidity caused by long-term double favorable balance in international payments also spurred the demand-pulled inflation. Western economies, particularly America, injected a huge amount of liquidity into the financial market to resolve the sub-prime mortgage crisis. US dollar was accelerating its depreciation. The prices of commodities like crude oil and iron ore keep skyrocketed in the international market. All these factors were imported into China and resulted in imported cost-pushed inflation which was characteristic of the price hike of daily chemical products with crude oil as raw material. At the same time, the re-estimation of main factor prices led to the increase of domestic labor salary and land price and even exacerbated the cost-pushed inflation.

B. The predicament of macro-economic policy options in curbing current inflation

Reviewing Chinese monetary policies over the past two year, we find them in face of the following predicament: (a) Limited room for raising interest rate. US has reduced its benchmark interest rate for 7 consecutive times after September 2007, from 5.25% to 2%, and many EU economies were also stimulated to reduce their interest rates together with America. In fact, China’s current interest rate is already higher than that of US. In other words, raising the interest rate will encourage more hot money to flow into China for arbitrage profits. In addition, higher interest rate will definitely enhance enterprises’ cost of fund, even aggravating the cost-pushed
inflation. (b) Limited room for raising required deposit reserve rate. Ever since the beginning of 2007, PCB has frequently raised the required deposit reserve rate which hit a record high of 17.5% in June, 2008. The excess reserves rate of financial institutes keeps going down, exerting negative impact on their healthy operation. On the other hand, increasing required deposit reserve rate is usually regarded as a tool of controlling the aggregate monetary supply which will in turn decrease the efficiency of resources allocation, distort industrial development and set obstacles for medium and small enterprises in getting necessary funds for even more robust development. Therefore, it is not an ideal option to continue tightening money supply.

Currently, Chinese inflation is mainly cost-pushed in nature and worsened by its structural imbalance. The government cannot curb it simply by tightening the aggregate economic volume. Instead, moderate acceleration of RMB appreciation will help to reduce the domestic price of imported commodities and accordingly curb the imported inflation. But RMB appreciation will encourage import, suppress export and reduce foreign demand. Without effective measures of expanding domestic demand, radical appreciation will probably lead to inadequate aggregate demand and then economic recession in spite of its effect in curbing the inflation. This will definitely place the government in a dilemma.

The earthquake that took place in Wenchuan, Sichuan Province on May 12, 2008 has brought about grave losses to local economy, and may further worsen the domestic inflation. On the one hand, the earthquake destroyed the fixed assets of local enterprises such as equipment and therefore their production capability, causing the domestic supply of public goods to decline. The earthquake in Sichuan Province, traditionally a major supplier of agricultural products, may even strain the supply of agricultural products in the domestic market and then drive their prices to go higher. On the other hand, the post-earthquake reconstruction demands huge amounts of manpower, material resources and financial investment, which may exacerbate the inflation by intensifying the imbalance between supply and demand. Tightened policies might be effective in easing the pressure of inflation but exerts negative effect on the economic growth and employment, leading to economic stagnation. Instead, if the government allows RMB to accelerate its appreciation, it will not only ease the pressure of inflation but cushion the blow of declining foreign demand caused by RMB appreciation with the help of huge domestic demand created by post-earthquake reconstruction. Therefore, China should seize the opportunity of reconstruction and accelerate the pace of RMB appreciation in a careful and moderate way.

On the basis of AD-AS framework, this paper constructs econometric models to analyze and predict the impacts of the Earthquake and RMB appreciation on aggregate demand and supply, simulate the impacts on China’s macro-economy, especially on its inflation, and then come up with policy suggestions.

II. The impact of Wenchuan Earthquake on Chinese macro-economy

By the end of May 2008, Wenchuan earthquake has claimed over 70,000 lives, with over 240,000 injured. It is estimated that 5 million people were affected by this horrible disaster, not to mention the direct and indirect economic losses which are beyond estimation. In this chapter, we will first study the data of some countries hit by serious earthquake to calculate their impact on these countries’ domestic economy, and then analyze the mechanism of economic impact from earthquake with the theoretical models constructed under the AD-AS framework\(^1\), as well as its impact on aggregate demand and supply with the.

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\(^1\) See Chen Xuebin (1995) for more information of the AD-AS macro-economic model.
1. Historical study on the impact of natural disasters on economy

Table 1 summarizes the human casualties and economic losses in Osaka-Kobe Earthquake, 9-21 Taiwan Earthquake, Hurricane Katrina and the Wenchuan Earthquake.²

Table 1: Direct impact of natural disasters throughout the world

<table>
<thead>
<tr>
<th>Disaster-affected population</th>
<th>Casualty</th>
<th>The ratio of Local GDP in national GDP</th>
<th>Economic losses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Osaka-Kobe Earthquake</td>
<td>Death: 5466</td>
<td>Over 1,400,000 1.1% of total population</td>
<td>23% USD 96 billion 1.8% of national GDP</td>
</tr>
<tr>
<td>(Jan.17, 1995)</td>
<td>Injured: over 30,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9-21 Taiwan Earthquake</td>
<td>Death: 2,405</td>
<td>Over 100,000 0.5% of total population</td>
<td>Over 50% USD 9.2 billion 3.3% of national GDP</td>
</tr>
<tr>
<td>(Sept.21, 1999)</td>
<td>Injured: 11,306</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hurricane Katrina</td>
<td>Several thousands</td>
<td>Approx. 1,000,000 2.2%</td>
<td>USD 120 billion 0.3% of national GDP</td>
</tr>
<tr>
<td>(Aug. 2005)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wenchuan Earthquake</td>
<td>Death: Approx. 70,000</td>
<td>Over 4,000,000 0.7%³</td>
<td>In estimation</td>
</tr>
<tr>
<td>(May 12, 2008)</td>
<td>Injured: over 240,000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 2 summarizes the economic data, such as GDP growth rate, fixed asset investment growth rate (FAI%) and CPI, of these countries and regions in the very quarter (or year) when the natural disaster happened, and in the 2 quarters (or 1 year) before and after the disaster.

Table 2: Natural disasters’ impact on major macro-economic variables throughout the world

<table>
<thead>
<tr>
<th>Osaka-Kobe Earthquake</th>
<th>9-21 Taiwan Earthquake</th>
<th>Hurricane Katrina</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time</td>
<td>GDP%</td>
<td>FAI%</td>
</tr>
<tr>
<td>1994Q3</td>
<td>2.53</td>
<td>0.5</td>
</tr>
<tr>
<td>1994Q4</td>
<td>2.05</td>
<td>1.97</td>
</tr>
<tr>
<td>1995Q1</td>
<td>1.56</td>
<td>-1.52</td>
</tr>
<tr>
<td>1995Q2</td>
<td>1.79</td>
<td>-0.03</td>
</tr>
<tr>
<td>1995Q3</td>
<td>1.66</td>
<td>0.84</td>
</tr>
<tr>
<td>1995</td>
<td>1.88</td>
<td>0.6</td>
</tr>
<tr>
<td>1996</td>
<td>3.62</td>
<td>7.04</td>
</tr>
</tbody>
</table>

² There is no agreement on the amount of direct economic losses in Wenchuan earthquake by the end of June, 2008. Lots of domestic economic institutes and scholars estimate that the loss might range between 150 to 500 billion yuan (for example, Air Worldwide, the disaster risk modeling company, predicts it to be USD 20 billion; State Information Center predicts 400-500 billion yuan; and Orient Securities predicts 200 billion yuan. Data Source: http://finance.jrj.com.cn/news/2008-05-22/00000036777042.html) So this paper will simulate Wenchuan earthquake’s impact on economy in different scenarios in the next chapter.

³ In 2007, GDP of Chengdu, Deyang, Mianyang, Guangyuan and Aba Autonomous Prefecture respectively account for 1.5%, 6.2%, 6.5%, 1.9% and 1.0% of the GDP of Sichuan Province, and the GDP of Sichuan Province accounts for 4.1% of the national GDP. 0.7% is calculated according to the above data.
Conclusion:

(a) The economic impact of natural disasters was in positive correlation with the proportion of disaster-stricken area’s GDP against the national GDP. In Japan and Taiwan, the GDPs of disaster-stricken areas accounted for 2.3% and over 5.0% of the national economy respectively, and 2.2% in US. In terms of the growth rate for GDP and FAI, it is obvious that natural disasters brought about greater economic impact in Japan and Taiwan.

(b) Impact of natural disasters on GDP and FAI: their growth both decelerated in short term, rebounded in mid-term, and completely recovered in long term. In Japan and Taiwan, economic and investment activities witnessed a conspicuous deceleration in the very quarter of the disaster. Their growth rates of GDP and FAI ranked the lowest among the 5 quarters before and after the disaster, but then rebounded immediately to a level slightly higher than the normal one, and ultimately returned to the normal level.

(c) Natural disasters imposed certain pressures on inflation. Japan’s CPI displayed a declining tendency against Taiwan and US. Taiwan suffered a slight pressure on inflation in short term, but the yearly data depicted a CPI hike in the latter half of the year. While in the US, CPI increased only in the very quarter when hurricane happened.

The proportion of Wenchuan’s GDP is much lower than that of disaster-hit areas in Japan and Taiwan, approximately equal to that in US (even lower). Therefore theoretically, Wenchuan Earthquake will have limited impact on the national economy (including the growth rates of GDP and FAI in the short and long-term), but it may aggravate domestic inflation by negatively influencing the prices of pork, food, natural gas, construction materials and medicine, etc. Though the output of above products from Wenchuan area only accounts for a small proportion in China which means the earthquake there will not strain the overall inflation scenario. But in consideration of the imported inflation caused by soaring price of bulk commodities in the international market (China is a major importer of crude oil and iron ore) as well as the accumulated excessive liquidity, China’s inflation will continuously go up in the next quarters.

2. The mechanism and model of earthquake’s economic impact

We will analyze earthquake’s impact from the aspect of aggregate supply and demand (AS-AD) and their composition:

In terms of aggregate supply, the earthquake decreases the capital stock (such as destruction of infrastructure and machineries) and labor forces (such as human casualties and consequent losses of labor productivity), and thus causes the supply capacity to decrease (moving the AS curve to the left).

In terms of aggregate demand, such factors as domestic investment and consumption, foreign demand and net export should be taken into consideration to study the earthquake’s impact in a comprehensive way:

(a) Investment. In the disaster relief stage, normal investment demand in the disaster-stricken area is supposed to decline in the short term; in the reconstruction stage, the investment demand will accelerate and rise substantially thanks to its need of restoring the capital stock and normal investment.

(b) Consumption. In the disaster relief stage, normal consumption demand is suppressed in the short term, but government’s expenditure on disaster relief keeps increasing (such as medical rescue and military mobilization), and the donation from the other areas of China will also spur consumption. In the reconstruction stage, normal consumption demand in the disaster-stricken area gradually restores, or even rebounds in a short-term. The government will also provide necessary fund for reconstruction. Therefore, reconstruction definitely exerts positive impact on consumption.
(c) Net export. Though China’s export demand is subject to external economic situation and will not be affected by the earthquake directly, RMB appreciation will decrease the aggregate demand by suppressing export.

According to the AD-AS model, aggregate supply and demand determine the output level and price level. Phillips Curve with expectation reflects the relationship between inflation and economic growth:

\[ \pi_t = \pi^e_t + b \frac{Q_t - Q^*}{Q^*} \]  

(\text{i})

\( \pi_t \) is inflation rate; \( Q_t \) is the actual economic growth rate; \( Q^* \) is potential economic growth rate, \( b \) is the coefficient reflecting the impact of macro-economic supply/demand balance on inflation (in the macro-economic scenario). If:

\[ q_t = \frac{Q_t - Q^*}{Q^*} \]  

(\text{ii})

\( q_t \) reflects balanced supply/demand in macro-economy, when \( q_t > 0 \), the inflationary gap exists; when \( q_t < 0 \), the deflationary gap exists.

\( \pi^e_t \) is the inflation expectation. If we adopts adaptive expectation hypothesis that:

\[ \pi^e_t = d_0 \pi_{t-1} + d_2 (\pi_{t-1} - \pi_{t-2}) \]  

(\text{iii})

Put equation (ii) and (iii) into equation (i), and we’ll get:

\[ \pi_t = bq_t + d_1 \pi_{t-1} + d_2 (\pi_{t-1} - \pi_{t-2}) \]  

(\text{iv})

Equation (iii) will be used to evaluate the relationship between inflation and output gap.

According to the average level of real GDP growth rate from 1980 to 2007, it is estimated that \( g^*t=9.73\% \). If we avail ourselves of the least squares method as well as the data from 1992Q1 to 2008Q1 to calculate equation (iv), we can get the following result:

\( \pi_t \) (based on GDPDI)=3.1181q^*t+0.9273\pi_{t-1} +0.3916(\pi_{t-1}-\pi_{t-2}) \quad (\text{v})

\begin{align*}
  (t=3.174) & \quad (t=37.989) & \quad (t=3.521) & \quad R^2=0.9485 \\
\end{align*}

\( \pi_t \) (based on CPI)=5.0225 q^*t+0.8999\pi_{t-1} +0.2729(\pi_{t-1}-\pi_{t-2}) \quad (\text{vi})

\begin{align*}
  (t=3.804) & \quad (t=31.306) & \quad (t=2.390) & \quad R^2=0.9615 \\
\end{align*}

Figure 3 shows that the two equations achieve satisfactory fitting effect on CPI and GDPDI (GDP deflator index).
(1) The prediction of China’s possible economic development tendency without the impact of earthquake

Firstly, we will take advantage of equation (vi) to predict the possible tendency for Chinese macro-economic development if the earthquake had not happened at all. This result can work as the basis of analyzing the economic impact of earthquake. Currently China is in the tightening cycle of macro-economic control. Its growth rate will gradually decline so as to curb the inflation rate to around 4.8% by the end of 2008. Figure 4 shows that Chinese real GDP growth rate will fall to 9.7% by the end of 2008 and 9.3% by the end of 2009, with its CPI back to 5.6% and 2.93% respectively. In the following analysis we will use these GDP and CPI figures as the benchmark of comparison.

Figure 4: The tendency of CPI growth under macro-economic control without the impact of earthquake

3. Multiple simulation results on earthquake’s impact on inflation
We use the above models to conduct multiple simulation analysis of the impact of earthquake on aggregate supply and demand in different scenarios:

Table 3: Simulated impact on CPI by rising aggregate demand caused by earthquake
CPI change over the same period % Without Earthquake Increase of aggregate demand
Table 3: Simulated impact on CPI by rising aggregate demand caused by earthquake

<table>
<thead>
<tr>
<th>CPI change</th>
<th>Without Earthquake</th>
<th>Increase of aggregate demand</th>
</tr>
</thead>
<tbody>
<tr>
<td>over the same period %</td>
<td>20 billion yuan</td>
<td>40 billion yuan</td>
</tr>
<tr>
<td>2008.1</td>
<td>8.30</td>
<td>8.30</td>
</tr>
<tr>
<td>2008.2</td>
<td>8.26</td>
<td>8.36</td>
</tr>
<tr>
<td>2008.3</td>
<td>7.56</td>
<td>7.79</td>
</tr>
<tr>
<td>2008.4</td>
<td>6.60</td>
<td>6.94</td>
</tr>
<tr>
<td>2009.1</td>
<td>5.61</td>
<td>6.05</td>
</tr>
<tr>
<td>2009.2</td>
<td>4.66</td>
<td>5.09</td>
</tr>
<tr>
<td>2009.3</td>
<td>3.77</td>
<td>4.15</td>
</tr>
<tr>
<td>2009.4</td>
<td>2.93</td>
<td>3.26</td>
</tr>
</tbody>
</table>

Figure 5: CPI increase after the Earthquake against the benchmark CPI

(1) The increase in investment and consumption during the reconstruction leads to the growth of aggregate demand. If the earthquake produces additional demand of 20, 40 and 60 billion yuan (distributed evenly into 4 quarters from 2008Q2 to 2009Q1), their impact on future CPI is simulated and summarized in Table 3. Figure 5 depicts the gap between future CPI benchmark and possible CPI performance against different demand growth. We can conclude that the earthquake might stimulate the aggregate demand to increase, which in turn results in mounting inflationary pressure in the future. In addition, the greater the aggregate demand is, the higher the inflationary pressure is.

(2) The short-term losses of production capability caused by the earthquake may exert negative impact on the potential production capability. Assuming that the Earthquake causes potential GDP to drop by 0.2% (or 50 billion yuan), 0.5% (or 120 billion yuan) and 0.8% (or 200 billion yuan) in short term (from 2008Q2 to 2009Q1) and the production capacity will recover its previous growth rate of 9.73% in the 5th quarter after the quarter, we study the different negative impact of potential production capacity on future CPI when post-earthquake reconstruction introduces a huge demand of 400 billion yuan (distributed evenly into 4 quarters from 2008Q2 to 2009Q1) (see Figure 6). Comparing Figure 6 with Figure 5, we can see that losses of potential production capacity impose extremely high pressure on future CPI, and the greater the losses are, the higher the inflationary pressure is.
The earthquake may even worsen China’s serious situation of inflation, and it will not be an ideal policy option to depend on the tightening policies exclusively to solve this problem. We assume that the reconstruction gives rise to additional 400 billion yuan worth of demand (distributed evenly into 4 quarters from 2008Q2 to 2009Q1) and the potential GDP decreases by 0.5% (or 120 billion yuan) in short term. Then Figure 7 demonstrates the earthquake even exacerbates the inflationary pressure. If the authority tries to use tightening policy to offset the negative impact from earthquake, it has to tighten the overall economic volume by as large as 907 billion yuan from 2008Q2 to 2009Q1 to return to the CPI level before the earthquake, which is potentially destructive to economic growth and employment rate.
Table 4: The scale of overall volume to be tightened to adjust CPI to the level as if the earthquake hadn’t happened

<table>
<thead>
<tr>
<th>Overall volume to be tightened</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008.2</td>
</tr>
<tr>
<td>2008.3</td>
</tr>
<tr>
<td>2008.4</td>
</tr>
<tr>
<td>2009.1</td>
</tr>
<tr>
<td>total</td>
</tr>
</tbody>
</table>

III. The impact of RMB appreciation on Chinese macro-economy

In this part we will analyze the impact of RMB appreciation on macro-economy mainly in terms of trade balance. First we will study the mechanism through which RMB appreciation suppresses inflation. Then we will take the quantity effect and price effect into consideration and then simulate and predict the impact of RMB appreciation on macro-economy, especially on inflation, under different economic scenarios.

1. RMB appreciation mechanism for inflation-curbing

   (1) Price mechanism

   According to the theory of purchasing power parity, the difference between the ROC (rate of change) of domestic CPI and foreign CPI equals the ROC of exchange rate, and this is the price mechanism through which changing exchange rate affects inflation. The appreciation of local currency helps to lower domestic prices of imported goods and thus decrease domestic price levels. The equation of the theory of purchasing power parity is as follows:

   \[ \frac{\Delta e}{e} = \frac{\Delta P}{P} - \frac{\Delta P^*}{P^*} \]  

   (vii)

   (2) Quantity mechanism

   According to the traditional theory of international balance of payments, as for the country with favorable balance, the appreciation of local currency will encourage import or reduce export, therefore cutting down the favorable balance. At the same time, the increase of foreign residents’ income will spur the demand for domestic commodities, driving the favorable balance to go up, while the increase of domestic residents’ real purchasing power will promote the import of foreign commodities, leading the favorable balance to go down.

   Here we have the functions of export/import demand:

   \[ \ln(EX_t) = \alpha_0 \ln(Y_t^*) + \alpha_1 \ln(E_t) + \alpha_2 + \varepsilon_t \]  

   (viii)

   \[ \ln(IM_t) = \beta_0 \ln(Y_t^*) + \beta_1 \ln(E_t) + \beta_2 + \varepsilon_t \]  

   (ix)

   EXt and IMt stand for export and import respectively; Yt and Yt* for domestic and foreign incomes; and Et for exchange rate. We collect the import/export data, real exchange rate, actual domestic and foreign incomes from 2001Q1 to 2008Q1 and put them into the above two functions, finally getting the following co-integration equation:

   A. Export Equation:

   LNEX=7.3100 LNWGBP-0.7287LNREER-69.6018  

   (648.31) (0.4743)  

   (x)
B. Import Equation:

\[
\text{LNIM} = 1.1040 \text{LNCGDP} + 0.0556 \text{LNREER} - 4.8546 \quad \text{(xi)} \\
(0.1424) \quad (0.6280)
\]

These two equations obviously indicate that RMB appreciation will both cut down the aggregate demand by dampening export and promote import by lowering costs. Later we’ll use the two equations to predict the impact of RMB appreciation on international trade.

2. Simulation of the impact of RMB appreciation on inflation

(1) In order to predict the impact of RMB appreciation on China’s foreign trade surplus, we will first predict China’s trade surplus with RMB exchange rate remaining unchanged. Except for exchange rate, domestic and foreign incomes are also important factors that might affect the balance of payment. We assume three different scenarios of global economic growth prospect. Scenario 1 conservatively sets the growth rate of global economy as 1.8% for 2008, and 2.1% for 2009. Scenario 2 sets the growth rate as 2.0% for 2008, and 2.5% for 2009. Scenario 3 optimistically sets the growth rate as 3.0% for 2008, and 3.5% for 2009. Table 5 lists the prediction of Chinese quarterly trade surplus from 2008Q2 to 2009Q4 in different scenarios.

(2) The quantity effect of RMB appreciation is dampening export and promoting import, thus changing the net export amount and ultimately the aggregate demand. Assuming the global economy will develop in the same way as Scenario 2 (global economy increases by 2.0% in 2008 and 2.5% in 2009) indicates, we study two RMB appreciation strategies to review their different impact on the aggregate demand. The first strategy aims at gradual appreciation, i.e., RMB exchange rate against USD seeing a steady quarterly increase by 2.5% from 2008Q2 to 2009Q1 and then remaining unchanged. The second strategy tries to realize a radical appreciation, with RMB exchange rate announcing a significant step-wise increase by 7% in 2008Q2 and then remaining unchanged.4

Table 5: Prediction of Chinese quarterly trade surplus in different scenarios

<table>
<thead>
<tr>
<th></th>
<th>Scenario 1: The global growth rate registers 1.8% for 2008 and 2.1% for 2009</th>
<th>Scenario 2: The global growth rate registers 2.0% for 2008 and 2.5% for 2009</th>
<th>Scenario 3: The global growth rate registers 3.0% for 2008 and 3.5% for 2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008.1</td>
<td>411.47</td>
<td>411.47</td>
<td>411.47</td>
</tr>
<tr>
<td>2008.2</td>
<td>532.51</td>
<td>539.18</td>
<td>595.30</td>
</tr>
<tr>
<td>2008.3</td>
<td>568.30</td>
<td>582.20</td>
<td>712.28</td>
</tr>
<tr>
<td>2008.4</td>
<td>619.02</td>
<td>645.62</td>
<td>845.34</td>
</tr>
<tr>
<td>2009.1</td>
<td>688.32</td>
<td>741.61</td>
<td>1020.27</td>
</tr>
<tr>
<td>2009.2</td>
<td>584.14</td>
<td>648.75</td>
<td>935.76</td>
</tr>
<tr>
<td>2009.3</td>
<td>627.19</td>
<td>716.14</td>
<td>1076.90</td>
</tr>
<tr>
<td>2009.4</td>
<td>672.43</td>
<td>787.60</td>
<td>1229.31</td>
</tr>
</tbody>
</table>

4 We got the estimated appreciation rate of 2.5% and 7% based on the requirement of offsetting the inflation pressure caused by the Earthquake.
Table 6: Impact of RMB appreciation on net export under different strategies

<table>
<thead>
<tr>
<th></th>
<th>Not considering RMB appreciation</th>
<th>Strategy One</th>
<th>Strategy Two</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Net export</td>
<td>Net export</td>
<td>Change of net export</td>
</tr>
<tr>
<td>2008.1</td>
<td>411.47</td>
<td>411.47</td>
<td>0.00</td>
</tr>
<tr>
<td>2008.2</td>
<td>539.18</td>
<td>492.61</td>
<td>-46.58</td>
</tr>
<tr>
<td>2008.3</td>
<td>582.20</td>
<td>485.80</td>
<td>-96.41</td>
</tr>
<tr>
<td>2008.4</td>
<td>645.62</td>
<td>495.49</td>
<td>-150.14</td>
</tr>
<tr>
<td>2009.1</td>
<td>741.61</td>
<td>532.36</td>
<td>-209.25</td>
</tr>
<tr>
<td>2009.2</td>
<td>648.75</td>
<td>476.41</td>
<td>-172.34</td>
</tr>
<tr>
<td>2009.3</td>
<td>716.13</td>
<td>536.26</td>
<td>-179.88</td>
</tr>
<tr>
<td>2009.4</td>
<td>787.59</td>
<td>599.85</td>
<td>-187.74</td>
</tr>
</tbody>
</table>

Table 6 shows RMB appreciation will cut down favorable balance. Strategy 1 definitely exerts less impact on net export than Strategy 2 in the short term. However, RMB has cumulatively appreciated by over 10% against USD in Strategy 1, higher than the appreciation margin in Strategy 2. Therefore, Strategy 1 exerts greater impact on net export in the long run, especially in the lag period of 2009Q2. Theoretically, Strategy 2 seems to be a better option in efficiently curbing inflation, at least in our model (see Figure 8). However since some enterprises cannot stand such a radical appreciation (this is not taken into consideration in our model), strategy 2 may be even more destructive in the long run because it doesn’t give enough time for export enterprises to restructure themselves and causes large numbers of medium and small enterprises to go bankruptcy, which ultimately affects economic growth and employment rate. The possible disadvantage for Strategy 1 is the appreciation expectation caused by gradual appreciation may incur the influx of large amounts of hot money and then aggravate the excessive liquidity and inflation pressure in China (we do not take these factors into consideration in the simulation analysis because there are too many factors affecting the short-term liquidity). As a result, it’s necessary to strengthen the monitoring on the flow of hot money in the short term.

Figure 8: Impact of RMB appreciation on quarterly CPI under different strategies
(3) The price effect of RMB appreciation is to reduce domestic prices of imported commodities and help curbing inflation. Supply capacity of domestic enterprises increases due to lowered costs.

Figure 9: Price pass-through effect of RMB appreciation on domestic prices

Here we compare the price pass-through effects of RMB appreciation in two strategies. We suppose that the pass-through effect has a lag effect and the pass-through rates are 0.7 in the first stage, 0.2 in the second stage, and 0.1 in the next. Since the manufacturing import exerts less impact on domestic prices, we deduct the factors of manufacturing import and calculate the relationship between prices of imported commodities and their domestic prices with the help of proportional coefficient \([\text{general import/(consumption + investment)}]\). Figure 9 indicates that RMB appreciation enjoys a more conspicuous price pass-through effect. It succeeds in lowering domestic inflationary pressure. In addition, Strategy 2 is more effective for curbing the short-term inflation, and Strategy 1 is effective for the long-term inflation.

(4) The comprehensive effect of RMB appreciation on inflation. This part is devoted to analyzing the quantity effect and price effect of RMB appreciation on inflation in a comprehensive way. We still adopt Scenario 2 as the background of our study. Both Figure 10 and 11 show that RMB appreciation does help to curb the inflation. And in Figure 12, we can see that Strategy 2 achieves particularly significant effect in curbing inflation in the short term; while Strategy works better in the long term.

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5 The empirical researches of Camap and Goldberg (2002) show that from 1975 to 1999, 25 OECD countries' short-term price pass-through rate averaged 0.61 in the short term, and 0.77 in the long term. Luo Zhongzhou (2004) discovered that from 1975 to 1999, the exchange rate pass-through rate of Japanese Yen was 0.88 in the short term, and 1.26 in the long term. Currently, there are actually few research on this issue in China, so this paper adopts reasonable assumptions in analyzing the price pass-through rate of RMB appreciation.
Figure 10: Tendency of macro-economic development with gradual RMB appreciation

Figure 11: Tendency of macro-economic development with radical RMB appreciation
IV. Comprehensive impact of Wenchuan reconstruction and RMB appreciation on Chinese inflation

The above analysis indicates that Wenchuan earthquake may aggravate the inflation by affecting both supply and demand, while RMB appreciation helps to lower the inflation pressure. However radical RMB appreciation alone will probably trigger economic recession by having negative impact on net export and then leading to insufficient foreign demand. However in this sense, the huge demand induced by post-earthquake reconstruction can make up for the insufficient foreign demand. Therefore, if China could seize the opportunity of post-earthquake reconstruction and moderately accelerate RMB appreciation, it will not only alleviate the inflation pressure imposed by the earthquake but avoid the impact from inadequate aggregate demand caused by radical RMB appreciation.
This part is devoted to a comprehensive quantitative analysis of the impact of earthquake and RMB appreciation on Chinese macro-economy, especially on the inflation. As for the impact of the earthquake, we assume that the earthquake causes the production capacity to decrease by 0.5% of GDP (or 120 billion yuan), and the reconstruction results in the losses of 400 billion yuan worth of demand (distributed evenly into 4 quarters from 2008Q2 to 2009Q1). As for RMB appreciation, we still select Scenario 2 as the background of the analysis and predict the effects of different RMB appreciation strategies. As is shown in Figure 13 and 14, both two strategies succeed in offsetting the negative impact of the earthquake on inflation and effectively curbing seriously rising inflation in China. Strategy 1 is obviously good at addressing inflation in the short term and Strategy 2 works well in the long term (our analysis does not take into consideration whether enterprises can stand the radical RMB appreciation and the appreciation expectation of gradual appreciation will attract the influx of hot money).

Figure 14: Macro-economic development tendency affected by earthquake and radical RMB appreciation

V. Conclusion

In recent year, China is troubled by its increasing inflationary pressure, so curbing the ever-increasing inflation has become the priority of macro-economic control. Wenchuan earthquake may aggravate the inflation by affecting the supply and demand, while RMB appreciation helps to lower the inflation pressure. However radical RMB appreciation alone will probably trigger economic recession by having negative impact on net export and then leading to insufficient foreign demand. However in this sense, the huge demand induced by post-earthquake reconstruction can make up for the insufficient foreign demand.

This paper constructs econometric models under AD-AS framework to simulate and predict the impact of the earthquake and RMB appreciation on aggregate demand and supply as well as Chinese macro-economy, particularly domestic inflation, while providing related policy suggestions:

If China could seize the opportunity of post-earthquake reconstruction and moderately accelerate RMB appreciation, it will not only alleviate the inflationary pressure imposed by the earthquake but avoid the impact from inadequate aggregate demand caused by radical RMB appreciation. Radical appreciation seems to be a better solution in efficiently curbing inflation,
but since it doesn’t give enough time for export enterprises to restructure themselves, this might causes large numbers of medium and small enterprises to go bankruptcy, which ultimately affects economic growth and employment rate. The possible disadvantage for gradual appreciation is that the appreciation expectation caused by gradual appreciation may incur the influx of large amounts of hot money and then aggravate the excessive liquidity and inflation pressure in China. As a result, China is required to strengthen monitoring on the flow of hot money.
I. The cause of sub-prime mortgage crisis

There are both direct causes and indirect causes that lead to the sub-prime mortgage crisis. The direct causes lie in relaxed macroeconomic policies and credit policies, imbalanced America economy (such as low saving rate and high household debt service ratio), and more importantly, the nature of sub-prime mortgage which, as a type of new financial product, enables people with low income or poor credit histories to enjoy the housing consumption which is beyond their future repayment ability. The indirect causes are due to deficiencies in supervisory sector, financial instruments, rating agencies as well as other fields.

Figure 1: Major events in the sub-prime mortgage crisis
Figure 2: Rising ratio of American household debt/GDP

The ratio of American household debt/GDP has surged from 60% in 1990 to 100% in 2007.

Actually we believe that it is essentially the more complicated fundamental reasons that give rise to the sub-prime mortgage crisis. What actually counts is actually the fact that the growth of global economy, particularly that of developed economies, has come to an inflection point. In the 1990s, the global economy, particularly the developed economies, was characteristic of high growth and low inflation, thus inducing economists and policy-makers to be over optimistic that they assumed the global economy, particularly the developed economies, had mounted to a new height.

The source of high growth and low inflation: what happened in 1990s was essentially thanks to the globalization dividend. Setting out on the road towards reforms and opening-up in 1978, China began to integrate into the global economic system in 1990s. India has been maintaining the opening policy, but his reforms were conducted a decade later than China before he joined the global economy. In addition, former Soviet Union and East Europe also tried to introduce some reforms before this period of time. It is recorded that in the 1990s, 500 million additional labor were from the emerging markets is, which were slightly greater than the total labor force in Western at that time, thus pushing the global productivity to skyrocket. Most of these new labors were working in the manufacturing industry and cost far less than their western counterparts. Their salary was only $1/20 of the western workers doing the same work and even less. In a word, such a sweeping globalization dividend is fairly rare in the economic development history.

Figure 3: Changing of Chinese labor force productivity and wages (exclusive inflation factors)
There are two other dividends closely related to the globalization dividend. One is IT dividend which refers to the scientific and technological revolution happening every three or four decades. As for countries initiating this revolution, their IT dividend is expected to diminish gradually after a decade. Another dividend is so-called peace dividend. The confrontation between the East and the West had basically come to an end in 1990s. The Peace dividend and the globalization dividend are highly correlated because without the peace bonus, the globalization bonus can never last for so long. Such a rare globalization dividend indeed helped Western developed countries in enhancing their productivity, and easing the inflation pressures at the same time.

It is until 2003 and 2004 that the West stopped criticizing China was exporting deflation to the world. Due to the cheap labor form developing countries and cheap goods in the market, the inflation in developed countries had been effectively inhibited. During this process, developed countries have also introduced significant major reforms to adjust their economy development. However, some people simplistically attribute the rosy global economic picture to the discover of new monetary policy, it is the credit of the Central banks and the inflation targeting regime particularly that ushered the global economy into a brand-new era of low inflation. About two or three years ago, lots of monetary economists were hoping to explain the great moderation of global inflation which refers to the phenomenon that volatility of inflation remains extremely low along with the slashed inflation level. George Akerlof, a Nobel laureate in Economics, published a well-known paper in 1990s with his partner. In this paper, he thought the optimal inflation level for America would be 2.5% ± 1%. If its inflation was lower than 1.5%, i.e. 2.5%−1%, American economy might head into deflation, just like what happened to Japan in the 1990s. But Akerlof also assured that it would be difficult for America’s inflation rate to surpass 3.5%, i.e. 2.5%+1%. Currently, the global inflation level rises at a fairly high speed and fluctuates significantly. Global deflation is bound to be a short-term phenomenon in nature, boosted by the global dividend (bonus). While when the global dividend (bonus) is diminishing, it is the time for revaluating all the assets. As a result, we have to discuss the sub-prime mortgage crisis against the practical global economic scenario of such. Readers can resort to the above three figures for detailed information.

II. The significance of the sub-prime mortgage crisis

George Soros once labeled the sub-prime mortgage crisis as the most significant crisis over the past six decades. Due to the rarely seen flourishing prosperity over the century, developed countries therefore have overestimated their economic growth, while underestimated the inflation, which leads to over-optimistic views on consumption. Now lots of people criticize that Greenspan’s monetary policies are too relaxed and there are people even said that it is him who should be responsible for depressed housing market and the sub-prime mortgage crisis. To some extend, such criticism is unfair. If the favorable situation could keep on going, the global economy were expected to grow even more prosperously, it thus would be possible for low interest rate, high asset prices, high liability and high consumption to exit. It is not only the housing market, but also the imbalanced American economy and the revaluation of global assets should be analyzed under the global economic context.

According to the latest estimation of IMF, the loss of sub-prime mortgage risk amounts to around $1 trillion. If the stock of collateral is taken into consideration, the Standard & Poor’s adopts the revaluation method acknowledged in the financial market and announces the sub-prime mortgage crisis would possibly results in a huge loss of $2.6 trillion, while the loss of $1 trillion is sufficiently to bring out global economic calamity. Beginning to surface in July 2007, the
The sub-prime mortgage crisis hits investment banks heavily at first and then poses a big challenge to central banks around the world because traditionally central banks are not allowed to support investment banks publicly. What is more terrible is that the negative impact from the sub-prime mortgage crisis has extended to commercial banks and if the world economy therefore turns into recession, the sub-prime mortgage crisis would only be the trigger of it.

Table 1: S&P’s latest estimation of the sub-prime loss

<table>
<thead>
<tr>
<th>Asset type</th>
<th>Estimated assets stock (Unit: trillion USD)</th>
<th>Original estimated loss ratio</th>
<th>Current estimated loss ratio</th>
<th>Gap</th>
<th>Estimated required loan loss provision (unit: billion USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resident personal housing mortgage loan</td>
<td>Prime: 8.5</td>
<td>0.15%</td>
<td>0.35%</td>
<td>0.20%</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>Alt-A: 1</td>
<td>1.50%</td>
<td>4.50%</td>
<td>3.00%</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>Sub-prime: 1.25</td>
<td>4.00%</td>
<td>12.00%</td>
<td>8.00%</td>
<td>100</td>
</tr>
<tr>
<td>Home equity lines of credit</td>
<td>1</td>
<td>4.00%</td>
<td>8.00%</td>
<td>4.00%</td>
<td>40</td>
</tr>
<tr>
<td>Consumption Credit</td>
<td>2.4</td>
<td>4.00%</td>
<td>6.00%</td>
<td>2.00%</td>
<td>48</td>
</tr>
<tr>
<td>Commercial Mortgage</td>
<td>3</td>
<td>1.75%</td>
<td>3.50%</td>
<td>1.75%</td>
<td>52</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>287</td>
</tr>
<tr>
<td>Banks’ loss is estimated to make up 75% of the total loss</td>
<td>215.25</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Credit Contraction Effect (multiplier)</td>
<td>12 times</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

III. Three possible waves of mortgage crisis

The sub-prime mortgage crisis is likely to bring out following three waves of losses: firstly, negative impact on investment banks; secondly, rising inflation and declining enterprise profitability with the impact on the tangible economy; thirdly, negative impact on commercial banks by means of credit crisis.

The first wave of losses against investment banks has come to an end and the turning point is recorded as March 17th-18th, 2008. Ever since July, 2007, the sub-prime issue began to arouse widespread concern in the financial market and then gave rise to the risk of running on banks. This risk is usually understood as nobody wants to underpin the capital price so the assets cannot be liquidated and people are reluctant to make asset transactions. This is actually what happened to Bear Stearns. The capital price, particularly those related to the sub-prime mortgage, underwent a series of adjustment during the whole process, which therefore posed a greater impact on financial stocks.

March 17-18--- a turning point for the sub-prime mortgage crisis. It is until March, 17 that the whole financial market stopped to worry about the breakout of major financial systematic risks. Bear Stearns is the first one that collapsed in the sub-prime mortgage crisis and might be followed by lots of other large investment banks, thus triggering a domino effect. On March 17, Bear Stearns was exposed to an urgent liquidity risk and about to go bankrupt. At this juncture, the Fed temporarily injected into the Bear Stearns about $30 billion through JP Morgan. It is recorded as the first time in the past decades that the Fed bailed out the investment bank. What’s more, since the Fed opened the discount window to all the large investment banks in the
Wall Street, they made huge amounts of short-term loans from the Fed every week. The financing limit of the discount window went up over ten times higher than before, with the highest coming to over $45.1 billion per a week. Undoubtedly, these measures effectively saved investment banks from bankruptcy. The market once predicted that financial stocks, especially large investment banks, were likely to go under in this crisis, but the Fed reassured people that this would never happen and financial assets had to be revalued. That is the reason why the price of financial stocks experienced an overall increase after March 18.

Figure 4: Weekly financing limits of Fed’s discount window (Unit: million USD)

The second wave of losses mainly involves American tangible economy. American financial stocks witnessed an obvious rebound since March 17th. Accordingly the financial market shifted its attention from financial stocks, particularly investment banks, to American tangible economy. For instance, American aluminum companies didn’t produce satisfactory profits in the first quarter because of rising inflation boosted the cost of production and thus eroded their profits (inflation exerts a negative impact on enterprises’ profitability through PPI). We expect that the second wave of losses would last from the middle of March to the end of May when the intensive period of annual report publications comes to the end. This wave might not be deadly in nature, while will definitely result in market turmoil.

America is likely to encounter the third wave of losses triggered by the credit crisis from May to the end of July. In fact, the correlation between the sub-prime mortgage and credit originates from the aggregation of all the term structures. April is traditionally the peak of American mortgage interest rate replacement. We stress in our investment strategy that “adequate liquidity should be reserved until April”. It is due to our judgment on risks that we believe there is a necessity of reserving adequate liquidity, while we select April as a turning point simply based on our analysis of American mortgage rate replacement timetable.
The sub-prime mortgage crisis has altered the financing pattern of American enterprises. The sub-prime mortgage crisis seriously dampens the market liquidity and enterprises significantly slash the amount of asset-backed securities. Different from Chinese enterprises who rely too much on the indirect financing pattern of banking market, American enterprises integrate both the direct and the indirect financing patterns. In other words, there are two engines driving the American enterprises, namely the capital market and banks. When the interest rate of the bond market remains low, the cost of short-term financing bonds will be even lower. Such a low-cost and high-efficiency financing pattern has contributed a lot to America’s rapid economic growth. But since July, 2007, the asset-backed securities have almost stopped its financing function while the existing short-term bonds mature successively. It is like one of the two engines is about to go dead. Enterprises fail to get direct financing by issuing bonds and have to resort to commercial banks for loans. That is the reason why enterprises’ demand for bank loans soared by a large margin.

As a result, America’s credit market features soaring bank loans and declining funds from asset-backed securities. The increase of bank loans might mislead some people into
believing that America’s credit market is pretty sound and even requires macro-control, because it is rising too fast. Since ABCP fell continuously, bank loans also began to decline in April, while the actual amount of capital financed did not see an obvious increase. As long as enterprises cannot get enough funds from asset-backed securities, market confidence will not be recovered. Against the sluggish market liquidity, American banks have to keep lending large amounts of loans to maintain the growth of American economy. The bank loans keep rising in part is because enterprises are in urgent demand of short-term liquidity, and in part is because lenders purchase loan commitment to be on the safe side. More and more credit stinting in American banking system indicates it is hard to sustain such a fast credit growth. Since the option of loan commitment tends to be one year and the sub-prime mortgage crisis broke out in the middle of 2007, it is expected that a greater credit crisis would take place around June and July, 2008. The Fed’s bailout efforts on March, 17th shows that it could not sit idly without lending a helping hand to commercial banks and remain indifferent to the credit crisis.

Figure 7: ABCP market shrank substantially

The sub-prime mortgage crisis poses great difficulties on the short-term liquidity of American credit market. TED Spread even soared to as high as 250 basis points, which has never happened over the past two or three decades. Even in the Asian financial crisis, TED Spread did not amount to such a high level. Although the Fed adopted a series of measures to inject liquidity into the market, they neither produced any positive effect nor recovered people’s confidence over the credit market. Currently TED Spread still fluctuates at a high level around 110 basis points (the normal level should be 30 basis points) and does not show any sign of declining. However, the systematic risk triggered by investment banks’ bankruptcy has basically under control.
IV. Two countermeasures against the sub-prime mortgage crisis

Either inflation or deflation. If we adopt deflation to deal with the sub-prime mortgage crisis, America is likely to suffer another great depression in the 1930s. That's the reason why George Soros labeled the sub-prime mortgage crisis as the largest crisis that has ever happened over the past six decades. Of course America does not want to see another great depression and so does Ben Bernanke, Chairman of the Fed and the authority in great depression research. The only solution for Bernanke to save America from the credit crisis is inflation. In other words, America will stick to fairly relaxed monetary policies in a long period of time with negative real interest rate.

Basically speaking, American economy has stepped into a new era of relatively high inflation, low growth and negative real interest rate. Currently America's CPI registers 4% and the Federal fund rate is 2.25%. Its housing industry is still in the process of price adjustment, with the possibility of housing prices continuously drop in the near future. The interest rate will remain negative for a fairly long period of time until the sub-prime mortgage crisis is completely resolved and housing price adjustment basically comes to an end. In the future, the CPI will continue to rise and inflation remains as a hard nut because America has to stick to relaxed monetary policies in a long period of time.
Except for the housing industry, it is hard to predict the fluctuation and trend of capital prices in other sectors. What is more interesting is that although America is the country where the sub-prime mortgage crisis originates, its capital prices drop by a smaller margin compared with other countries like China. The financial crisis does impose a great pressure on American capital market, but theoretically speaking, its negative real interest rate is adequate to support the high capital price.

Figure 10: Rate of return for major stock markets in 2008

We can refer to the formula $P = \frac{D1}{r-g}$ to estimate capital prices ($P$ stands for price; $D1$ for stock dividends or returns of the next year; $r$ for expected rate of return; and $g$ for growth rate). Europe is less affected in the sub-prime mortgage crisis, but its stock drops even greater than America. Currently, both dollar zone and Euro zone witness similar declining economy and enterprises’ profitability, but their monetary policies are quite distinctive from each other. America cuts down the interest rate by 300 basis points within six months, while the Euro zone sticks to its tightened monetary policies. American low interest rate inhibits the expected capital return, so both $r$ and $g$ displays a downward trend, leaving less impact on the capital price. However, this is not the case within the Euro zone where $r$ rises up and $g$ slides down, so their stock falls greater than America’s. Chinese stock market drops even greater than the Euro zone but its structural drawbacks have to be taken into consideration.

Since America’s interest margin against other countries keeps expanding, US dollars accordingly keep weakening against other currencies, which also help to shift some sub-prime losses on to other countries. Substantial depreciation of US dollar spurs the price of commodities such as raw materials, oil, gold and agricultural products. As the largest agricultural product export in the world, American agricultural export produces a large amount of trade surplus in 2007, only after aviation products. Thanks to the soaring prices in 2008, agricultural products will definitely yield greater trade surplus. Currently foreign banks and governments hold altogether $2.27$ trillion American bond among which American treasury bonds amount to $1.34$ trillion. Except for Japan, Russia and petroleum exporting countries in the Middle East, China is also among the largest creditor countries, with its foreign exchange reserve above $1.6$ trillion. Significant depreciation of US dollars inflicts huge losses on America’s creditor countries.
V. Judgment on American measures against the sub-prime mortgage crisis

People might wonder how America dealt with the sub-prime mortgage crisis and what lessons they get in this process. American government has shown unprecedented courage and resoluteness in its fight against the crisis while the Fed also introduces a series of new policies and instruments. Although it is too early to judge whether America is successful in this battle, its efforts are likely to become a classical case for further reference.

Since America, the most developed capitalist country in the world, bail out investment banks in the mortgage crisis, some people claim it is leaning towards socialism and criticize America for it. If necessary, America will adopt lots of innovative policies to rescue its capital market and economic system. For instance, currently some people suggest American government to purchase MBS. If that came true, the government would become the largest landlord in the country. If commercial banks find it hard to survive the third wave of losses, we don’t exclude the possibility that the Department of Treasure would issue special T-bonds to bail out them and even nationalize some banks. The first round of stock market rebound after March 18 is totally created by the government’s intervention dividend.

Intervention dividend creates a safe environment without the risk of bankruptcy, but too much government intervention will lead to the failure of capital price mechanism. This is indeed a hard problem to solve. But at a critical juncture, the government has to be resolute in action and adopt new policies and instruments when necessary. Quibbling over the concepts and the legitimacy of policies will not be any helpful, only to miss the opportunities of combating the crisis. In a word, theoretical innovation always comes from practice.
"What a Difference a Year Makes"
Richard Kramlich

In thinking about the past 12 months and reviewing the material in the briefing book, I am struck by “what a difference a year makes”.

In the 1st half of '07 the US seemed to be coasting along, Private Equity was flowing, the IPO market was as good as it had been for 6 or 7 years, the US economy was at high levels of employment and the issue seemed to be fixed on how high should interest rates be? Even the surge in Iraq was working.

Then it all unraveled.

Even the few who saw it coming were not given much voice, and then the subprime nightmare hit us like an iceberg. The tentacles of securitization gripped us like an octopus. The credit markets suddenly awoke to a tsunami of problems. In what seemed like an instant, banks and other financial institutions froze lending and credit. Private Equity went off a cliff. The IPO market ground to a halt by year end. We, as a country, came to realize that we were in the worst financial shape in 3 generations, literally since 1933. Our debts were 350% of GDP vs. 270% in 1933. Real Estate, the backbone of private wealth was declining weekly, now down about 30% effectively eliminating much of the equity value in people’s homes. Personal debt as a % of per capita GDP has gone from 60% in 1990 to 100% in early 2007. Acronyms and letters the public knew little about started appearing in the popular press – MBS, CRA’s, CDO’s, CRO’s, auction rate securities, covered bonds and finally “Hope Now” - a way to keep 1.7 million people in their homes as banks worked out their individual problems under life saving legislation. Only 3 heroic Central Bank interventions totaling $284 billion – including the unforgivable Bear Stearns debacle where they were levered 35:1 – kept us from a full scale panic. On top of that gasoline doubled to $4.50/ gallon. Now I realized what my parents meant when they talked about the ‘30’s. We had been living in delusional complacency.

How do we feel about all this? Well, shame on us.

We in the VC market kind of chug along. We don’t rely much on debt, because our companies can’t support it. That’s sort of a life saver. In early ’07 I remember thinking that our friends in Private Equity have it much better than we do. They were getting an unlimited amount of covenant light, low interest long term loans, essentially free money. It just did not seem real. It wasn’t.

Unfortunately, I think this situation is going to be with us until the housing market turns. We are witnessing the largest peaceful transference of wealth in the history of the world thanks to oil and commodities. Some of this capital has helped save us. It’s been called a “Quiet Bail-Out”. Most of the immediate shock appears to now be absorbed in the system. I know there has been some criticism of Paulson and Bernacke, but I think they are heroes for dealing with the hand they’ve been dealt.

Now that is financial turmoil. We’re lucky the market isn’t down double what it is.

How does this affect China and are there any lessons learned?

China – I admire your systematic long term planning process. At times it seems phlegmatic to us in the US, but it seems to put long term planning in the hands of engineers and economists,
not lawyers and politicians. But beware of the ripple effect on China from the turbulence of the US Economy. The US will probably cost you one or two percentage points of growth this year. Lessons learned for the US – we should take a page from China’s book and start a medium term planning process that is systematic and balanced. As the House of Representatives is in charge with spending the nation’s money it should be under their auspices.

Further, to avoid the cataclysmic events of the last half of ’07 we should have a “Financial & Economic Consequences” desk reporting to the Secretary of the Treasury. Not a cabinet level person, not a bureaucracy, just one smart, experienced person, a look-out if you will, who does nothing but scan the horizon for trouble and report it to the Treasure Secretary.

Now I would like to address an area I theoretically know something about: Private Sector Investments, Sovereign Wealth Funds, Private Equity and Venture Capital.

Notwithstanding the turmoil discussed in section I of this paper the ongoing presence of Private Sector Investment world-side is a very stabilizing force. It has become integrated with Global Trade and drives efficiency. Some have called it a Global Dividend as it has fostered relatively high growth without excessive inflation.

Fareed Zariah in The Post-American World cited that in 2006-2007, 124 countries grow at 4% or more. As is pointed out in this book, which, I am sure, many of you have read, the engines of growth have moved well beyond the United States and Europe and are being led, not only by the BRIC countries, Brazil-Russia-India-China, but are also joined by these 100+ other countries growing at faster clips than the US. China, of course, has a 3 decade record of approximately 10% growth in GDP per year. Economic growth and interdependency has to precede the evolution and development of the capital markets. What is exciting is the growth of the middle class in these countries which reduces poverty and fosters consumer spending. In my way of thinking, that is granting people their human rights.

I’ll speak briefly about Private Equity Sovereign Funds and Venture Capital. As noted earlier Private Equity, as defined today, has been with us since the mid-80’s. It peaked in early 2007, raising some $300 billion in the prior 12 months, 10 times the amount raised by US Venture Capital over the same period. The total capital at work in Private Equity is about $2 trillion. During the 5 years through the end of ’07, returns in Private Equity were robust, in the low to mid 20% range. The results in Private Equity tend to correlate with credit availability, cost and a reasonable stock market. Leverage, financial engineering and the cost and productivity of acquired company operations are central to good results. We are now in a testing period for Private Equity. Time between Acquisition and divestiture is not their friend, although some strong Private Equity firms take rightful pride in long ownership. Private Equity tends to sharpen up the system as very few capitalizations are beyond their range.

Sovereign Wealth Funds have been in place since the’70’s, but have escalated dramatically since 2000. There are now over 20 such funds, 12 of which have been started since 2005. The total capital in these funds exceeds $3 trillion and I have seen estimates that by 2015 will exceed $12 trillion, thanks largely to oil. Some funds - Abu Dhabi, Singapore, (GIC and Temasek), and Kuwait - have long standing, diversified and sophisticated investment operations. Incidentally Abu Dhabi, GIC and Kuwait are all LP’s of ours. China entered this field in 2003 and has an estimated $200 billion under the auspices of the China Investment Corp. Of course China also has $1.8 trillion in foreign exchange reserves. China’s wealth has been earned by positive trade balances for quite sometime. There has been quite a bit written about Sovereign Funds Best Practices which deal with sensitive issues such as National
Security, corporate control, etc. Our experience has been excellent. The staffs of these organizations are professional and long term growth oriented. Most often, we find, sovereign funds invest in pools of capital, rather than individual securities. As stated earlier, however, some have participated in the “Quiet Bail-Out” of Wall Street in the past 12 months.

Venture Capital is recognized as a basic engine of growth, employment and innovation. While only between $25-35 billion of Venture Capital has been raised annually in the US over the past 5 years (only 0.2% of the GDP) the aggregate output accounts for 18% of the GDP and 9% of total employment in the private sector. The aggregate amount of Venture Capital currently in the US is approximately $250 billion. Venture Capital is notoriously cyclical. Its exits are governed by a healthy IPO (Initial Public Offering) market or mergers. We are currently in the longest drought since the mid-70’s (when we started NEA by the way). The total number of Venture firms is sliding from 1,200 in 2000 to 850 in ’07 to somewhere between 500-600 active firms is our guess. In terms of returns, there has never been a 10 year cycle that Venture returns did not outperform all other asset classes. That is a result of 1 or 2 good years in a decade. It is interesting to note that in 2007, 40% of the world’s IPO’s came from the 4 BRIC countries, up from 5% ten years ago. This year that number will at least be 60%. This reflects the exciting spread of the capital markets. It is also a clarion call to the US exchanges that have been developing world wide franchises over the past 5 years.

I am worried about the capital markets and the IPO market. The US has been its own worst enemy with excessive costs and regulation, all of which, taken with the turmoil in the US, has shut down new issue activity. There are scant hopes it will return anytime soon. Our experience, however, is that times like these offer excellent investment opportunities.

Innovation is the life blood of Venture activity. I won’t list all the important developments spawned by Venture, but it includes biotechnology, semi-conductors, computers, communications, the internet, health care systems, software, consumer electronics and now Clean Tech. Apple, Google, Intel, Microsoft, EBay, and Starbucks and now Sun Power comes to mind. Between 1983 and 1992, Venture Capital was less than 3% of American R&D and yielded 8% of technological innovation. In my judgment innovation is not going away.

In China, Venture activity is 10% of that in the US ($2.5 billion in ’07) but it has been doubling annually. From what I’ve seen the Chinese understand that job creation and innovation follow Venture activity. We are active here on the ground in Beijing and Shanghai and in Bangalore, India. We expect to invest $500 - $600 million of our next fund (or up to 20%) outside the US.

Our fundamental belief is that capitalism is alive and well in the world, despite the current headwinds and that the so-called “Rise of the Rest” only supports the economic model the US developed from Europe. China, with its strong but relatively inefficient banking system but efficient and underdeveloped capital system has and will improve over time as a leader in world economic affairs.
I. Financial Structure and Economic growth

There was once a prevailing theory in Western mainstream economics, i.e. finance is of little importance and just passively plays a role industrialization and economic growth (Robinson, 1952; Lucas, 1988). But the latest theoretical and empirical studies have both refuted it and proved the significant role that finance plays in the economic growth. However, how does finance work exactly in the economic growth? The financial system usually fulfils five functions: centralize the savings, allocate resources, optimize corporate governance, manage risks and lower transaction cost. As far as the economic growth is concerned in the long run, it comes from two sources: capital accumulation and technological innovation, which are both affected by the five functions of the financial system in a direct or indirect way. To be specific, centralized savings facilitate capital accumulation. The effective resource allocation results in effective capital utilization, thus further promoting capital accumulation. Improvement of corporate governance, effective risk management and lowered transaction cost also help to allocate capital in the most efficient way and then stimulate the formation of new capital. On the other hand, if the capital is able to be allocated to the place where it is needed most at a low transaction cost, this will, together with effective risk management and corporate governance, undoubtedly spur the technological innovation. In addition, capital accumulation is also used to finance the technological innovation. The above brief analysis indicates that finance should exert direct effects on economic growth. Figure 1 illustrates the theoretical relationship between finance and economic growth while are there convincing evidence that can prove this relationship? Some empirical researches show once the financial depth of an economic entity increases from the bottom quarter to the top quarter, the per capita income growth will accelerate by 1%. For example, Bolivia’s financial depth was only 10% in 1960. If she could have lifted the financial depth to 23%, the average level of developing countries at that time, her per capita GDP in 1990 could have been 13% higher (King and Levine, 1993). There is even some evidence proving that financial development can be an effective indicator to predicate the economic growth rate and capital formation in the future. Lots of cross-country research, case studies as well as industrial and enterprise analysis point out that finance has a crucial effect on the level and means of economic growth. In contrast, a country might get bogged down into the poverty pit due to inadequate financial development, even when it has met with all the other requirements of economic growth, such as stable macro-economic environment, open foreign trade policy and universalized system of education.
Figure 1: Theoretical relationship between finance and economic growth

What is worth noting is that finance and economic growth features a two-way relationship. The financial development is, on the one hand, the driver of economic growth, and on the other hand, the result of economic growth. The financial development and economic growth actually interact with each other.

After the relationship between finance and economic growth is clarified, people might wonder what kind of financial system is the most beneficial for economic growth. Generally speaking, all the financial systems in the world fall into two types: the one dominated by (commercial) banks and the one dominated by (capital) market. As far as most Chinese people are concerned, their initial impression for financial system is the banking system under the strict control of government before and at the beginning of reforms. Driven by the forging-ahead development strategy, this powerful national system of state-owned banks centralized citizens' savings and established an industrial system focusing on the development of heavy and chemical industry soon after PRC was founded. Lots of other former socialist countries and even some later modern capitalist countries such as Germany and Japan also experienced similar stage. The bank-dominated financial system is capable of raising adequate fund within a short period of time and using them to rapidly accomplish the industrialization. Since later
modern capitalist countries usually feature underdeveloped markets, banks are able to raise funds by means of scale effect while availing themselves of their dominant position in the information asymmetry market to force firms to provide information to banks, intervene the corporate governance and supervise the credit safety. Banks are also superior to the market in terms of guaranteeing long-term fund for enterprises. What’s more, when the banks are owned by the government, they can not only avoid the problem of market failure but also finance national strategic sectors in a more effective way (Gerschenkron, 1962).

In spite of all these advantages, more researches discover that bank-dominated financial system is actually plagued by lots of inherent drawbacks. Firstly, the mighty banks prefer to protect mature enterprises, and this definitely hinders innovation (Hellwig, 1991; Rajan, 1992). In the meantime, banks usually ask for additional rents since they have access to enterprises’ confidential information. Firms are reluctant to invest in profitable projects because more profits will be taken away by banks. (Hellwig, 1991; Rajan, 1992). This is clearly demonstrated in Japanese main banking system. On the one hand, Japanese main bank exerts excessive protection over firms in their banking bloc. It insists on financing even low-efficient enterprises to protect them from being washed out by the market. On the other hand, firms are forced to pay higher interest rate and rents to the main bank in exchange for its protection. Such a system obviously declines the efficiency of resource allocation and obstructs the process of eliminating the inferior enterprises, which actually was the major cause for Japanese sluggish economy in the late 1980s.

Secondly, and more importantly, there are fundamental differences between banks as creditors and shareholders in terms of their incentive mechanism. As a creditor, what the bank cares about most is whether the debtors can repay the loan before the due date. Since the creditor is the owner of the fixed income instead of residual claimant, what concerns him most is the downside risk that might affect his fixed income, rather than the additional upside profits. In other words, the excess returns have nothing to do with banks, so they would rather encourage firms to invest in low-risk projects with stable returns. This inherent conservative inclination is not in favor of innovation in nature. If enterprises are at the mercy of banks, undoubtedly their willingness towards innovation and risk-taking would be below the optimal level for the social development.

On the contrary, the capital market is more conducive to innovation. As the residual claimant, the shareholders can get all the excess returns while their downside risk is confined to the limited liabilities of their capital contribution. As a result, the shareowners naturally pursue higher returns by taking higher risks, while innovation is essentially highly risk-oriented. In addition, the capital market works better in boosting innovation than banks in two ways. In the first place, the capital market enjoys information advantage. The banks usually enjoy information superiority against the long-term clients which are likely to be the mature enterprises in the mature industry, with steady cash flow and mature technologies instead of innovative technology and production model. However, new technologies tend to scatter in the market and people’s understanding of them varies from each other. As a result, it requires specialized division of labor, advanced expertise and the courage of taking risks, which are exactly the advantages of capital market, to detect the potential of new technologies and then invest in them. It is exactly what the investors of the capital market are doing. For example, the venture capital equipped with advanced expertise struggles to identify new technologies and entrepreneurial teams which are potentially successful and then actively take risks to pursue excess returns. In addition, venture capitalists and other equity investors are also good at finding the most innovative entrepreneurs with outstanding managerial capability. All these works are far beyond the capacity of commercial banks. The other advantage of the capital
market is risk management. The equity investors can diversify their investment in varied projects to achieve effective risk management, and transform those enterprise assets into securities so that they can be cashed out or transferred timely. Historical experiences show that it was the development of British capital market that directly gave rise to the Industrial Revolution (Hicks, 1969). In fact, lots of technologies during the Industrial Revolution had already been invented several decades before. This means that technological innovation was not the direct cause for the Industrial Revolution. The flourishing capital market transformed the short-term capital into the long-term investment in enterprises. Since the shareholders could cash out or transfer their share options in the capital market at any time, enterprises were ensured a huge and steady source of capital, no longer being plagued by the problem of long-term financing. The capital market, in turn, further promoted the long-term investment in scientific research and boosted the emergence of new technologies. In consideration of its huge demand for a long-term and large-scale investment, the Industrial Revolution would have never happened without the development of the capital market. Consequently, “the Industrial Revolution has to wait for the Financial Revolution at first” (Bencivenga, Smith and Starr, 1955). Figure 2 shows that British stock market achieved rapid progress soon after the Glorious Revolution, prior to the Industrial Revolution taking off at the late 18th century.

The above analysis seems to indicate that in the long run, the financial system dominated by the capital market is more efficient than the bank-dominated one. Is that the truth? We will then conduct a detailed analysis by a simple model. Suppose a firm’s gross assets register ¥ 1000, including ¥ 500 bank loan (including both principal and interest rate), then the value of its stocks is ¥ 500. The expected return of project A is ¥ 2020 and ¥ 1875 for project B. As for project A, there is a 5% probability that its profits could only be ¥ 400, not sufficient to repay the bank loan. In contrast, project B can guarantee a profit of ¥ 1000 even in the worst case which is adequate for the repayment. Consequently, shareholders prefer project A to
project B because the expected return of project A is higher (¥ 1525 > ¥ 1375). Project A has a wider risk interval which means greater upside returns and greater downside losses. Since the shareowners can get all the upside returns after the bank loan is repaid and undertake the downside losses together with the bank, they would like to choose project A rather than B. It is the same case with the whole society because the expected returns of project A are higher than the project B (¥ 2020 > ¥ 1875). As a result, the optimal solution is to leave shareholders to choose investment projects by themselves.

### Project A

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### Project B

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However, if the shareholders have absolute decision-making rights over the issue of investment under the circumstance that the enterprise is in debt, this will possibly give rise to another problem: excessive risk-taking which might result in wealth transfer from the creditor to the shareholder. For example, the shareholder might choose project C which is expected to yield ¥ 1650 but decrease the bank loan to ¥ 350 and accordingly the total expected returns to ¥ 2000. After that, let’s compare the risks of each project. The standard deviation for Project A is ¥ 853, ¥ 545 for Project B and ¥ 2784 for Project C. Project C seems to be the worst choice for the bank, but the best for shareholders.

### Project C

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In an effective market, shareholders can negotiate with creditors to resolve all the above internal conflicts. For instance, since the enterprise can transfer its investment on Project A or
Project C, the bank can ask for a higher interest rate to offset such a risk. Similarly, if the enterprise decides to invest in Project B, the equity investors can then demand for a lower stock price. The negotiation between the shareholders and the banks usually ends with two results: either the shareholders agree to pay higher interest rate in exchange for bank's acceptance of higher risks; or the banks agree to grant lower interest rate so that the shareholders commit not to take higher risks. The agreement between the shareholders and creditors not only protects their interests but also guarantees effective resource allocation and optimizes social value.

We can lead to the following conclusions from the above analysis. Firstly, the bank-dominated financial system is not the optimal one. Secondly, an effective financial system should strike a balance between the interests of shareholders and creditors, i.e. achieving a balanced development between the capital market and the banking system. Either excessive protection or neglect of one of the two parties will result in the failure of resource allocation. Thirdly, the imperfect market might hinder the free negotiation between the shareholders and creditors from coming up with satisfactory results. The reward of enterprise managers is composed mainly of salary and their human capital is totally invested in one particular enterprise instead of being scattered in different fields, so they tend to be as conservative as the creditors, consequently leading to inadequate innovation and risk-taking of the enterprise. As a result, people should attach more importance to developing the capital market and eliminating the obstacles to enterprises' competition, acquisition and innovation while fully developing the banking system. Institutional investors, including the equity funds, then provide the most effective way in eliminating all these obstacles.

II. Current situation of Chinese financial system: imbalanced structure with low efficiency

China's financial system is still dominated by banks. In 2002, its bank loans register 111% of GDP and this ratio even increased to around 114% in 2006, against the average level of 62% in English-speaking countries including America and Britain, 99% in German-speaking countries which feature the most typical bank-dominated financial system in the world, and the average of 73% in all the other countries. The operational costs of Chinese banking system make up 0.12% of their total assets, against the average ratio of 0.03% in other countries (Allen 2008). Even in French-speaking countries which are famous for their highest banking operational cost, the ratio of operational cost/GDP is no more than half of China's level. In addition, China’s bad debt ratio once reached 22.5% at its peak, much higher than Japanese bad debt ratio (15.6%) which ranks the highest in the world (Allen, 2008). In the past decade, the highest bad debt ratio of America registered only 1.1% and 3.2% for India. All these data indicate that Chinese tremendous banking system is plagued by low efficiency, measured by their operational costs and bad debt.

In addition, the efficiency of banking system can be demonstrated by the direction of bank loans. The annual output growth was only 5.4% for Chinese state-owned sectors and listed enterprises between 1996 and 2002, against 14.3% for non-state-owned sectors and non-listed enterprises. In terms of the industrial gross output, the former made up 33%, while the latter 67%. In other words, non-state-owned sectors and non-listed enterprises contributed about 80% for the industrial output growth during the seven years. If we take a closer look at their bank loans, it turns out that the loan/GDP ratio decreased from 1.11 in 1996 to 0.24 in 2002, which shows that most of bank loans were channeled into state-owned sectors and listed enterprises. In other words, the non-state-owned and non-listed sectors, who contribute the most to the economic growth, only get access to a small proportion of the bank loans. This further highlights the low efficiency of Chinese banking system.

Now let's examine the current situation of China's capital market. In 2002, the total market value of China's capital market accounted for 32% of GDP, obviously lower than the
global average level of 47% (the average level for English-speaking countries was 58% and that of America and Britain were both over 120%). However, dramatic changes took place in China’s stock market in 2006. Its market value were 8.94 trillion RMB in 2006 and this ratio skyrocketed from 17.63% in 2005 to 42.69% in 2006 (CSRC, 2008). While by the end of 2006, the market value of tradable shares was 2.15 trillion RMB, only making up 10% of Chinese GDP (CSRC, 2008), against the average level of 27% in the world and 31% in English-speaking countries. In 2002, the proportion of Chinese bank loans against total market value of capital assets was over 3 : 1, compared with the average level of 1.5 : 1 in the world and approximately 1 : 1 in English-speaking countries. By the end of 2006, the total loan balance registered 23.83 trillion RMB in China (CBRC, 2008), and its ratio against total market value was still as high as 2.66 : 1. It then can be said that the banking system absolutely plays a dominate role in Chinese financial system and its degree of domination ranks the highest in the world (Figure 4 compares the financial structure of major markets in the world).

How about the efficiency of Chinese capital market? Figure 3 compares the returns of global major stock markets between 1992 and 2006.

**Return on Stock Indexes around the World**

![Figure 3: Return on stock indexes around the world between 1992 and 2006](image)

During this period of time, Shanghai Stock Exchange yielded greater return than Tokyo and London, but was not as good as New York S&P 500 and Indian BSE. However, Chinese annual economic growth rate (10.1% in real terms) was far higher than that of America (3%). There are only three possible explanations for this discrepancy: Chinese listed enterprises are too disqualified to reflect the real scenario of Chinese economy; the stock price could not reflect the real strength of Chinese listed enterprises; or the above two phenomena integrate with each other. In any case, they all shed light on the inefficiency of Chinese stock market. In addition, the immaturity of Chinese stock market is also manifested in the following two aspects. Firstly, the fundamentals of listed companies cannot be fully reflected by their share price and the behavior of investors. Speculation and inside trading is rampant in China. Secondly, Chinese stock market tends to suffer dramatic fluctuations. For example, Shanghai-Shenzhen 300 index fell by as much as 51.5% of its peak in October, 2007, almost ranking the largest fall in the world (during the same period of time, the Dow Jones Index fell by 20% in America which was the center of the sub-prime mortgage storm). Besides, the share prices in Chinese stock market usually move “in sync”. In other words, the prices of most stocks tend to increase or decrease
simultaneously. This is typical to emerging markets who usually fail to protect small and medium investors and regulate the stock market inadequately (Mock et al. 2000). At the same time, small and medium sized stocks transact with a remarkable frequency, with their circulation speed reaching 153% and even higher than New York Stock Exchange (Allen et at. 2008), and the buying and selling usually occurs in the same day (Fend and Seasholes, 2004). All of these indicate that Chinese stock market features frequent speculation and short-term trading.

The efficiency of the capital market is also manifested in the ratio of external financing/GNP. An efficient market is supposed to support a higher ratio of this type. In contrast, a less-efficient market finds it hard to facilitate the external financing, so firms are forced to rely on bank loans, fund-raising on their own, private funding and other unofficial channels to get sufficient funds. According to latest researches, the ratio of external financing/GNP in China was only 16% in 2002, far below the average level of 40% in the world (Allen et al. 2007). Its A-share market raised 246.37 billion RMB in 2006, only accounting for 1.17% of GDP (CSRC, 2008).

Chinese bond market is dominated by treasury bills and policy-based financial bonds while the development of corporate bond market is far lagged behind. By the end of 2005, Chinese bond market capacity was 2.88 trillion RMB, and maintained a high annual growth rate of 26.9% between 1990 and 2005. The policy-based financial bonds valued 1.78 trillion RMB and the scale of corporate bonds during the same period was less than one tenth of the treasury bonds. What is interesting is that the inadequate bond market, particularly inadequate corporate bond market, is prevalent among Asian countries. Figure 4 illustrates the structure of financial market in major countries and regions in 2003. It is clear to tell that except for Japan, the treasury markets of all the other Asian countries are smaller than European and American treasury markets in scale. What's more, Japanese corporate bond market is also smaller than its government’s bond market. Nevertheless, even among Asian countries, Chinese corporate bond market turns out to be the least developed.

Figure 4: Financial market structures in major countries and regions of the world

There are many possible reasons to account for the insufficient development of bond market, namely inadequate accounting and auditing systems, lack of high-quality rating agencies, lack of complete yield curve and duration structure, and more importantly, lack of
effective legal guarantee for creditors’ interest. The underdeveloped bond market leads to the incomplete duration structure of the interest rate and consequently hinders the development of its derivative market, which not only prevents firms and investors from managing risks but also weakens the effectiveness of macro-economic policies.

Another proof for the inefficiency of Chinese capital market is the grave shortage of institutional investors who usually play a crucial role in developed financial markets, such as pension funds, insurance companies, university endowment funds, securities investment funds, venture funds, equity funds and hedge funds. In the first place, as long-term investors, institutional investors help to stabilize the market. In the second place, institutional investors have large numbers of professional workers, thus capable of conducting in-depth analysis and scientific evaluation of listed firms and providing sufficient market information. In the third place, they can effectively supervise enterprises, curb the self-interest behavior of enterprise’s managers, lower the agency cost and improve the corporate governance. American pension funds, such as Calpers, have set up an excellent example for institutional investors to participate in the corporate governance and improve it by a large margin.

Chinese institutional investors develop far later than other countries and currently are composed of four types: securities investment fund, QFII, insurance and social security fund, and enterprise annuity. Among them, securities investment funds made remarkable achievements in 2006. The net assets under their control rose to 856.5 billion RMB by the end of 2006, with a year-on-year increase of 83%. In the same year, the total market value of stocks held by QFII amounted to 97.1 billion RMB, while that of stocks held by insurance agencies and social security fund were 63.3 billion RMB and 56.3 billion RMB respectively by the end of 2006. The enterprise annuity fund was also ushered into the capital market and signed contracts worth of 9 billion RMB with 9 fund management companies (CSRC, 2007). In spite of the rapid development, Chinese institutional investors are really small in scale compared with mature markets. For example, the net value of American securities investment funds reached $11 trillion by the end of 2006 and even rose to approximately $13 trillion by the end of 2007. During the same period of time, American pension funds came to $16.5 trillion and $17.6 trillion respectively (Investment Company Institute, 2008).

Currently, there is an obvious drawback in the structure of Chinese institutional investors. To be specific, it mainly focuses on the securities investment funds, while neglecting the development of venture capital and equity funds. Comparatively speaking, the venture capital starts off earlier and has succeeded in enacting a law in the form of sector regulations; however, they are still playing a limited role in boosting the development of new enterprises. For example, the total investment of Chinese venture funds in 2007 hit a record high over the past six years, but only amounted to $2.49 billion (China Venture 2008). In contrast, American venture investment was $26 billion, only making up 0.2% of its GDP, while the output of firms financed by venture capital accounted for 17.6% of GDP and generated 9.1% of the total employment in the private sector (Venture Impact, 2006). The venture investment makes an outstanding contribution to American economic growth as well as its technological innovation, and brings up a large number of well-known firms, including both hi-tech enterprises such as Microsoft, Apple, Intel and Google and non-hi-tech enterprises but with innovative management model and business model such as Starbucks, eBay and Home Depot. Empirical studies indicate that one-dollar’s venture investment yields a return two times higher than that of one dollar invested in R&D of traditional firms. During 1983 and 1992, American venture capital was less than 3% of R&D expenditure while yielded 8% of the technological innovation. This number even reached 14% in 1998 (Kortum & Lerner, 2000). Just as the earlier analysis shows, capital market plays an irreplaceable role in encouraging technological innovation and backing new enterprises. In
the modern society, hi-tech and emerging enterprises can get substantial support from two 
channels which closely integrate with each other, namely dynamic venture capitals and healthy 
stock market. The former relies on the latter because a dynamic stock market, particularly the 
IPO and M&A markets, is the major channel for the venture capitals to exit and realize excess 
returns.

Except for the venture capitals, private equity also works well to improve enterprises’ 
innovation and efficiency. There are mainly two types of private equity: one focuses on investing 
growing enterprises while another aims at conducting LBO on mature enterprises and then 
getting them to list again with higher stock price or selling them after having them restructured. 
The former is relatively small in scale, while the latter, the LBO funds, has become the 
mainstream of private equity. After investing in a growing enterprise, private equity would 
restructure its technological and management system to yield greater values and then exit by 
selling the enterprise at a higher price. The mature enterprises being acquired usually have 
steady cash flows but are plagued by their poor management, so there is much room to improve 
their efficiency. After a LBO, the private equity will take advantage of huge debt restraint as well 
as effective supervision and incentives over management to restructure its technological, 
management and financing systems and to achieve tremendous returns. Therefore, firms are 
threatened to improve their management efficiency under the pressure of LBO so as not to fall 
prey to private equity. As a result, LBO and M&A together work effectively in improving the 
efficiency of enterprises. American private equity funds totaled as high as $300 billion in 2004 
(Lerner, Hardymon & Leamon, 2005). On the contrary, Chinese equity market just made a start. 
There are only a few industrial investment funds established in the past few years with limited 
capital and lack of experienced professionals.

Why should China intensify its efforts in developing the capital market, especially the 
equity funds involving venture capitals and private equity? The answer lies in the special 
characteristics of Chinese development at this stage. Firstly, Chinese capital market is relatively 
weak compared with its banking system. Although not as efficient as foreign counterparts, it is 
more efficient than its banking system. We can use the term of structural efficiency 
(Log{(market value of capital market/GDP) X (operational cost of banks/gross assets of 
banks)}) to measure the relative efficiency of the capital market against the banking system 
(Allen et al. 2007). It turns out that Chinese structure efficiency is highest, i.e. Chinese capital 
market is far more efficient than its banking system (See Table 1).
In terms of Chinese financial system, on the one hand, Chinese banking system is oversized against insufficient capital market and on the other hand, the efficiency of the banking system is relatively low. Therefore, the sharp contradiction in the financial system lies in the coexistence of inadequate capital formation and excess bank loans (Dai, 2008). Chinese capital market is not as efficient as other countries but far more efficient than its own enormous banking system. Thus under the same conditions, devoting more efforts in developing the capital market is expected to produce higher marginal returns. At present, Chinese capital market is centering on stock market, with few institutional investors, while the underdeveloped institutional investors focuses mainly on securities investment while attaching less importance to the equity funds. So if more time and efforts are devoted to the equity funds, the funds can not only push the industries to generate higher returns than the stock market does, but directly raise the efficiency of capital formation, promote innovation, improve corporate governance and enhance enterprises' operational efficiency. In addition, they are particularly effective in improving the overall financial structure and the efficiency of the financial system to produce greater marginal returns. As far as the capital formation is concerned, Chinese most efficient sectors, the non-state-owned and non-listed sectors, have fairly limited access to external financing from the official channels, such as the banking system and the capital market. Chinese financial system has remained deficient in financing small and medium-sized enterprises. As a result, China must intensify its efforts in financial innovation while a multi-layered direct financing system would provide sufficient financial support to those most efficient enterprises, which in turn will directly enhance the efficiency of Chinese overall economic system. As an important part of this multi-layered direct financing system, private equity serves as an effective channel for these enterprises to get direct financing and enlarge their capital. A large proportion of private equity would exit the market in the future by selling the firms on the stock market, and this in turn would directly increase the quality of Chinese listed companies, thus improve the efficiency of capital market. In terms of the macro-economic system, the substantial development of the equity fund will help to resolve the contradiction between inadequate capital formation and excess bank loans and transform more social capital into production-oriented capital, therefore decreasing China's reliance on foreign capital and updating Chinese macro-economic structure (Dai, 2008). In addition, China is currently at a stage which requires it to achieve

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<td>Structure Activity</td>
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<tr>
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Table: Cross-country comparison of financial market structures (Allen et al. 2007)
industrialization and informatization at the same time; to acquire the mature technology of traditional industries while achieving the breakthrough in the hi-tech industries and rapidly updating the industrial structure; and to devote great efforts to the labor-intensive industries to guarantee adequate employment while pushing forward the knowledge-intensive and capital-intensive industries to catch up with the developed countries and create higher value added. Subject to the dual-nature of this task, China could no longer rely on the traditional bank-dominated financial system. This paper tries to prove with its penetrating analysis that the advantage of the banking system lies in its support for the traditional industries, while that of the capital market lies in its support for new technology, new enterprises, new management methods and new operating models. In the modern society, the capital market mainly relies on the integration of equity funds and dynamic stock market to highlight its advantages. Since Chinese stock market has begun to be on the right track, it is extremely urgent for China to devote more efforts in developing the private equity market, which is essentially in line with the requirement of the 17th CPC national congress to “optimize the structure of capital market and enhance the proportion of direct financing through multiple channels” (Dai, 2008).

The key of developing the equity funds is to draw on international experience and make an energetic effort in creating a favorable legal regulatory environment, while relaxing the restriction on the investment scope of social security funds and commercial insurance funds. According to American experiences, its equity funds experienced a huge leap-forward development exactly in 1979 when the “prudent man” principle was introduced into ERISA (Employee Retirement Income security Act) and the restrictions on the pension equity fund was completely lifted. Without the strong financing support of institutional investors typically represented by the pension fund, the equity fund could not have made a remarkable achievement since the 1980s. Currently, the pension funds in various types have developed into the largest institutional investors in the equity funds involving the venture investment and private equity.

III. Conclusion
This paper’s analysis leads to the following conclusions:

Firstly, finance exerts powerful and positive effect on economic growth, which has been explained both theoretically and empirically in this paper.

Secondly, the bank-dominated financial system and the one dominated by the capital market have their own merits and demerits. Generally speaking, giving priority to the development of the banking system allows the underdeveloped countries to rapidly centralize the capital within a short period of time and realize industrialization. However, if the banking system monopolies the financial system, in the long run it will dampen competition and hinder innovation, finally leading to poor efficiency of both enterprises and economy. Instead, the capital market is in favor of competition, innovation and high efficiency, but it tends to take excessive risks, over-protect shareholders and ignore creditors’ interests, leading to the wealth transfer from the creditors to the shareholders and ultimately low efficiency of social resources allocation. Therefore, China’s long-term target should be striking a balance between the development of banks and capital market and finally establishing a balanced financial system.

Thirdly, the outstanding contradiction of Chinese financial system is the imbalance between the banking system and the development of capital market. Therefore, the development of capital market should be given priority in China’s agenda, which is in line with the reality that Chinese capital market operates with higher structural efficiency than Chinese banks.
Fourthly, the key of developing Chinese capital market lies in establishing a multi-layered capital market system involving stock market, bond market and etc. Greater efforts should be devoted to developing institutional investors and equity funds represented by venture investment and equity funds. The prosperity of equity funds can at the same time exert positive effects on the following six aspects, i.e. facilitating the capital formation; deepening the development of the capital market and upgrading the financial structure; promoting the development of small and medium-sized enterprises; improving the macro-economic control; stimulating innovation and encouraging investors to pursue for higher returns. As a burgeoning industry as the equity fund is in China, it can draw on the mature experiences of America and Europe. Currently China relatively has abundant capital, while the bottleneck for the development of equity fund and the capital market as a whole is the lack of sound legal and regulatory environment as well as experienced managerial personnel. As a result, China should focus on two tasks in the next step. To be specific, on the one hand, China should accelerate the legislation work for equity fund and establish a relaxed and competition-oriented legal framework by referring to the international experiences. On the other hand, it should devote more time and efforts to attracting and fostering more qualified managerial personnel for its emerging equity funds market.
Reducing Systemic Risks to China’s Financial System through Greater Legal and Regulatory Certainty
Keith Noyes

Preface:

China’s rapid development into an international financial center continues to impress. There are now two stock exchanges, a government bond market, and gold futures to name but a few visible signs of this development. There is also a nascent on-shore OTC derivatives market and a vibrant cross-border derivatives market. However, even while product sophistication increases and transaction volumes climb, critical legal and regulatory action is still necessary to provide essential structural support for the OTC derivatives market. This paper will focus on two issues critical to giving the OTC derivatives markets sound underpinnings: 1) Enforceability of close-out netting; and 2) Resolution of the overlap between the two Chinese domestic master agreements governing OTC trades.

1) Enforceability of close-out netting

What is close-out netting?

Most documents that are widely used in international financial derivative markets are drafted as a type of master or framework agreement. Each of these master agreements is designed as a master netting agreement under which the parties can enter into a number of different trades and, on close-out, calculate the net exposure between the parties under all of these trades.

Close-out netting in relation to OTC derivative transactions is the ability of a party under a master agreement for such OTC derivative transactions (such as an ISDA Master Agreement) to net the mark-to-market values of all existing transactions under the master agreement upon their early termination following the default of its counterparty or other specified events.

A simple comparison between a loan and derivative transactions highlights the importance of close-out netting. In a loan, the borrower always owes money to the lender and the principal amount owed is clearly identified. In a derivative transaction, either party could owe money to the other and the amount owed depends on the mark-to-market (“MTM”) value, a value that changes from day to day and even intra-day. There may also not be any maximum limit to the amount owed. As the MTM could increase with each passing day, in a default scenario, it is of critical importance that the transaction be terminated so as to fix the amount owed. Parties intend to enter into multiple transactions and close-out netting allows the offsetting of the positive and negative MTM exposures arising from the portfolio of transactions to arrive at a single net amount payable by one party to the other. Without close-out netting, each party would be potentially taking unlimited credit risk to the other.

The benefits of close-out netting are risk reduction and cost reduction.

The risk reduction is twofold - reduction of credit risk and reduction of systemic risk. Credit risk reduction benefits an individual party by reducing its overall exposure to its counterparty. A simple example to illustrate this process is as follows: if Party A owes Party B $10, and Party B owes Party A $10, on a net basis, each party’s exposure to each other is $0, not $10. However, if the transactions cannot be netted and Party A defaults, Party B would still owe Party A $10 and would join the other creditors of Party A waiting for the liquidator to distribute whatever remaining assets Party A possesses. By reducing credit risk at each node in the network of relationships between market participants, close-out netting also lessens the potential adverse impact resulting from the termination of the transactions of a market...
participant on the other participants in the market, and would therefore have an important beneficial effect on systemic risk.

Close-out netting may also result in cost reduction. When credit risk is reduced, financial institutions are able to use their capital more effectively. Credit lines can be freed up and reserves may be reduced so as to allow a more productive use of capital that would otherwise be allocated inefficiently.

To illustrate this point, consider the Bank for International Settlement Report of May 2008, using data as of December 2007:

The total notional amount of all outstanding OTC derivatives on a global basis was US$596 trillion.

The total mark-to-market value of all outstanding OTC derivatives on a global basis was US$14.5 trillion (2.4% of notional amount).

After applying close-out netting, the total mark-to-market value was reduced to just US$3.3 trillion (0.5% of notional amount), representing a reduction of 77.6% from the gross mark-to-market amount.

Current legal status of close-out netting in China

Close-out netting is not a separately recognized legal concept under Chinese law. The enforceability of the close-out netting provisions will thus likely be considered in the context of insolvency set-off under Chinese law. Under present Chinese law, before the commencement of liquidation proceedings, a creditor of an insolvent company is entitled to set-off any debt owed by it to the insolvent company against any debt owed to it by the insolvent company.

After the commencement of liquidation proceedings, a creditor may now "assert" a right of set off. This is different from the position under the old Chinese bankruptcy law which provided that the creditor is entitled to apply to the liquidation committee1 to set off the debt owed by it to an insolvent company against any debts owed to it by the insolvent company up to the finalization of the property distribution plan. However, in the absence of interpretation rules regarding the new bankruptcy law by the People’s Supreme Court, there is still uncertainty as to the interpretation and application of this right of "assertion" of set-off. In addition, under the new bankruptcy law, the possibility of the liquidator cherry picking certain transactions rather than looking at the net exposures cannot be ruled out.

It is this lack of legal certainty that introduces unwanted risks to the Chinese OTC derivatives industry.

Market impact - Chinese banks suffer the most

The Basel II Accord specifically recognizes close-out netting as a risk reduction tool and, subject to certain conditions, grants favorable treatment of transactions entered into under netting agreements for capital adequacy purposes. This allows the beneficiaries to enjoy

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1 Under the PRC law, the court shall establish the liquidation committee within 15 days after an enterprise is declared insolvent. The members of the liquidation committee shall be designated by the court from among the officials of various government departments, accountants and lawyers. The liquidation committee is responsible for sorting out, recovering, managing, disposing of the assets of the insolvent enterprise, preparing and executing property disposal plan and representing the insolvent enterprise in litigation and arbitration. It is not wholly clear whether the liquidation committee will be obliged to allow set-off if all stipulated conditions are satisfied or what other criteria a liquidation committee could take into account in rejecting or allowing a set-off.
reduced capital reserve requirements against their transactions, freeing up capital for other uses.

In order to obtain this capital relief, the regulatory authorities of the relevant financial institutions must be satisfied that close-out netting will be enforceable under the insolvency laws governing the counterparty. The required regulatory assurance is generally provided in the form of a favorable legal opinion from local counsel. Once the financial regulator has the necessary legal assurances on the enforceability of close-out netting, the regulator, through issuance of financial regulations, will permit regulatory capital for the relevant transactions to be calculated on the basis of a party's net (rather than gross) exposure to counterparties.

The Chinese Banking Regulatory Commission ("CBRC") has set a goal for the ‘Big 4’ Chinese Banks to meet the Basel II capital requirements in 2010 and for smaller banks to meet the Basel II requirements in subsequent years. Since there is no positive legal opinion for China on close-out netting, Chinese banks must hold capital reserves on all inter-bank transactions with all Chinese counterparties on a gross basis.

The full impact on Chinese banks is evident in their transactions with foreign banks. Because the foreign banks do not receive any capital relief on their transactions with Chinese banks, they demand that Chinese banks post collateral against gross exposures, even if the net exposure is zero or the foreign bank owes the Chinese bank money on a mark-to-market basis.

The reverse, however, does not hold if the foreign bank is headquartered and transacting through an office in a netting-friendly jurisdiction. The foreign bank can rightfully point out to the Chinese bank that if it were to default, the Chinese bank would be able to net exposures and would not be subject to cherry picking by the foreign liquidator and therefore argue for posting collateral against the Chinese bank's net (instead of gross) exposures to the foreign bank.

As a result, the flow of collateral has been mostly a one-way street in recent years, with Chinese banks having to convert more and more Chinese Yuan into US dollars to post offshore collateral as transaction volume and, correspondingly, gross exposures increased. Unfortunately for these Chinese banks, the exchange rate has moved against them on their offshore collateral.

What China can do to improve legal certainty

There are several different approaches that Chinese authorities might consider to achieve enforceability of close-out netting:

(a) Enacting general netting legislation

In civil law jurisdictions such as China, legal certainty of close-out netting is generally achieved through specific netting legislation. Examples in the Asia-Pacific region where specific netting legislation was introduced include Australia, Japan, New Zealand, and South Korea. Examples elsewhere include Austria, Belgium, Brazil, the Czech Republic, Canada, Denmark, Finland, France, Germany, Hungary, Ireland, Italy, Luxembourg, Mexico, Norway, Poland, Portugal, South Africa, Spain, Sweden, Switzerland and the United States.

It is also pertinent to note that the trend among countries implementing close-out netting legislation has been to include as broad a range of financial transactions as possible, and not exclusively limiting the legislation to derivatives. Securities lending and repurchase agreements are among the broader list of financial transactions commonly included in netting legislation. A
jurisdiction that is contemplating enacting netting legislation needs to evaluate the types of transactions to which the legislation should apply.

The move toward broadening the types of financial transactions to which close-out netting in insolvency applies is further demonstrated by the Model Netting Act, first published by ISDA in 2002 with the most recent version released in October 2007. The Model Netting Act is part of an effort to support the adoption of specific netting legislation in countries where there is still doubt about the enforceability of close-out netting. Transactions eligible for netting under the Model Netting Act—called "qualified financial contracts"—include a wide variety of derivatives, as well as securities lending and repurchase transactions. In addition to the list of specific types of eligible transactions, the definition of qualified financial contracts includes a catch-all category designed to encompass unique derivative transactions not falling into other categories, or which may be developed after the Model Netting Act is adopted.

Passing such sweeping legislation in China in a timely manner may be a challenge. The 2006 Bankruptcy Law that came into effect in June 2007 went through almost 15 years of deliberation before being passed. It is unlikely that legislation such as the Model Netting Act would be passed quickly.

(b) Enacting specific netting legislation for financial institutions

Netting legislation ensures that close-out netting will be enforceable under certain circumstances in an insolvency proceeding against a particular counterparty. Generally, the scope of the netting legislation is limited to derivative transactions, repurchase transactions and securities lending transactions and may be limited to transactions documented under certain types of contracts, such as certain specified master agreements. In some jurisdictions, the scope of the legislation is further limited to transactions involving only certain types of institutions, such as banks or other specified financial institutions. The current drafting of the Banking and Financial Institution Bankruptcy Regulation provides an ideal opportunity to make close-out netting enforceable between banks, though transactions with corporate counterparties would still be excluded. This would still bring tremendous benefits to the financial industry, though it remains to be seen how quickly this regulation can be passed by the State Council once drafting is completed and if the regulation drafters from the various regulatory bodies would include netting language in the regulations they are currently writing.

(c) Judicial interpretation by the Supreme Court

An alternative to amending current legislation or enacting netting legislation is for the Supreme Court to issue an interpretation of the 2006 Bankruptcy Law to confirm that a party enforcing the close-out netting provisions would simply be asserting his right of set-off and would not require approval or confirmation from the liquidation committee. The interpretation should also state that the provisions of a netting agreement will be enforceable in accordance with its terms against the insolvent company.

The courts, however, have indicated that it would be more appropriate for more detailed legislation or regulations to be passed rather than for the courts to take the lead in this matter. If close-out netting is "asserted" and challenged by a liquidation committee before the courts, it remains to be seen how the courts would rule on this issue.
2) Resolution of the two Chinese master agreements overlap

Internationally, virtually all OTC derivatives transactions are conducted using the ISDA Master Agreement to govern the transactions between the counterparties. When Chinese institutions trade cross border, they also use the ISDA Master Agreement.

For domestic transactions, two home grown master agreements governed under Chinese law have been created with the support of Chinese regulators. The first of these master agreements drafted by the State Administration of Foreign Exchange ("SAFE") and the China Foreign Exchange Trading System ("CFETS") and known as the CFETS Agreement came into effect in 2006 and governs Renminbi-foreign exchange forwards and Renminbi-foreign exchange swap transactions between financial institutions in China.

Subsequently, a new self-regulatory organization, the National Association of Financial Managers and Institutional Investors ("NAFMII") was established by the People's Bank of China and charged with drafting the China Inter-bank Market Financial Derivatives Master Agreement (2007 Version) (the "NAFMII Agreement").

Under Section 3(I) of the NAFMII Agreement (which cannot be amended by the parties), any Financial Derivative Transaction to be entered into between the parties is required to be governed by the NAFMII Agreement. The term "Financial Derivative Transaction" (the scope of which cannot be amended by the parties) is defined broadly and includes interest rate derivative transactions, bond derivative transactions, currency derivative transactions and credit derivative transactions.

Both the CFETS and the NAFMII Agreements must mandatorily be signed for the transactions each governs. Therefore, if two parties who have signed the CFETS Agreement also enter into the NAFMII Agreement, any currency derivative transactions (such as Renminbi-foreign exchange forward or swap) between them will potentially be governed by both the CFETS Agreement and the NAFMII Agreement. This could bring both legal and documentation risks to these market participants, because if an event occurs in relation to a party that may give rise to an action under one master agreement but not under the other, there is likely to be confusion as to what rights the parties have under each agreement and what action they may take. Even if a similar action happens to be triggered under both agreements, the rights and remedies available to a party may still be different with the result that the consequence of a particular event or action may become uncertain and open to argument.

Further, the co-existence of the two master agreements has also weakened the single agreement concept and thus increased credit risk and systemic risk for market participants. Outside China, market participants use the ISDA Master Agreement to govern OTC derivative transactions regardless of whether the transaction type is a foreign exchange, rate, credit, commodity or equity trade. Similar to the ISDA Master Agreement, the NAFMII Agreement and the CFETS Agreement have also incorporated the "single agreement" and "close-out netting" provisions. The single agreement concept is a critical element of the netting mechanism in the sense that it makes all transactions inextricably connected which means, as a matter of credit risk management, that if a default under one transaction occurs, all transactions should terminate and be netted. Having different agreements for different products creates multiple pools of transactions, undermining the benefits of netting. It defeats the purpose and benefit of having one single master agreement for all OTC derivatives and is not in line with the market practice prevailing in most other jurisdictions.
Chinese regulators have acknowledged the overlap in the two domestic agreements and expressed a desire to merge the agreements into one single agreement. However, the two agreements are fundamentally different from a drafting perspective and perhaps not that easily merged. December 2009 has been given as a suggested target date for consolidating into a single master agreement.

In the meantime, there are interim solutions available to the regulators such as bridging the two agreements, or perhaps more pragmatically, carving out the proscribed RMB transactions from the NAFMII Agreement so that they fall solely within the realm of the CFETS Agreement. Neither of these solutions is optimal, but either would reduce legal basis risk for the institutions transacting in these products.

For the moment, however, there appears to be no consensus amongst the regulators as to what course to take and the financial industry has no choice but to accept increased systemic risks introduced by the very organizations that regulate them.
Pitfalls in a Post-Bubble World

A year ago, there was barely an inkling of what was about to transpire in world financial markets and the global economy. There were some early warning signs that all was not well in the subprime slice of the US mortgage market. But as was the case with the dot-com bubble in early 2000, subprime was widely judged to be of little consequence for the macro story. Denial, one of the most powerful of human emotions, once again had the upper hand. The broad consensus of consumers, business people, policymakers, and politicians ignored simmering problems on the subprime front and believed that the global boom of the preceding five years was very much intact.

The argument a year ago was laced with a painful sense of déjà vu. At the end of 1999, dot-com accounted for only 6% of the market capitalization of US equities. A powerful, flexible, and innovative US economy was believed to offer built-in resilience and ongoing support to the other 94% of the US equity market and the macro economy. A year ago, subprime accounted for only 14% of total securitized mortgage debt outstanding. A still powerful, flexible, and innovative US economy was once again believed to offer ongoing support to the other 86% of the mortgage market and the broader economy (see Figure 1).

How wrong this logic was – in 2000 and, again, just a year ago. Eight and a half years ago, the bursting of the dot-com bubble was, in fact, followed by a 49% decline in the broader S&P 500 index over the next two and a half years. And the bursting of the subprime bubble a year ago has triggered an unprecedented contagion throughout the broader credit and capital markets. The lessons are painfully similar. When an entire asset class – or for that matter, an economy – goes to excess, the weakest link in the chain often deals a decisive blow to the system as a whole. The bubble analogy works all too well. When the thinnest part of the membrane gives way, the rest of the air escapes all too quickly.

But the imagery misses one critical point. The progression of bubbles is an insidious process. From equities to property to credit, the bubbles have expanded in scope and risk. A bubble-prone US economy became a breeding ground for a gathering storm of systemic risks in America and in an increasingly interdependent world economy. And now we are left to pick up the pieces.

Figure 1: Two Canaries in the Coal Mine

Dot-Com Bubble
Market Capitalization: US Equities (Year-end 1999)
- 6% Dot-com share
- 94% Other

Subprime Bubble
Securitized Mortgage Debt Outstanding (March 2007)
- 6% Jumbo
- 12.7% Alt-A
- 14.3% Subprime
- 63.5% Prime Conforming

$17.2 trillion total equity market cap
$6.3 trillion total securitized mortgages

Source: Federal Reserve, FDIC, MBA, Morgan Stanley Research

In the Beginning

No economy can live beyond its means in perpetuity. Yet like others that have tried to do so in the past, the US thought it was different. America’s current account deficit surged from 1.5% of GDP in 1995 to 6% in 2006. At its peak annualized deficit of $844 billion in the third quarter of 2006, the US...
required $3.4 billion of capital inflows from abroad each business day in order to fund a massive shortfall of domestic saving.

For the longest time, such funding was there for the asking. There were plenty of new theories concocted to rationalize why the unsustainable might actually be sustainable. Foreign lending with impunity was a special privilege that fell to the nation possessing the world’s reserve currency, many argued. Some went further, celebrating the advent of a new “Bretton Woods II” arrangement, whereby surplus savers such as China could forever recycle excess dollars into US assets in order to keep their currencies competitive and their export-led growth models humming. In the end, of course, these “new paradigm” explanations – like those of the past – failed the test of time and the markets.

A record US consumption binge was at the root of the problem – sparked by an audacious shift from income- to asset-based saving.

At the root of the problem was America’s audacious shift from income- to asset-based saving. The US consumer led the charge, with trend growth in real consumer demand hitting 3.5% per annum in real terms over the 14-year interval, 1994 to 2007 – the greatest buying binge over such a protracted period for any economy in modern history. Never mind a seemingly chronic shortfall of income generation, with real disposable personal income growth averaging just 3.2% over the same period. American consumers no longer felt they had to save the old-fashioned way – they drew down income-based saving rates to zero for the first time since the Great Depression. And why not? After all, they had uncovered the alchemy of a new asset-based saving strategy – first out of equities in the latter half of the 1990s and then out of housing in the first half of the current decade. Laxity in regulatory and supervisory oversight, in conjunction with excessive monetary accommodation, led to an explosion of free and easy credit that turned out to be the icing on the cake.

In retrospect, the equity wealth effect was child’s play in comparison with what the American home eventually was to offer. At its peak in mid-2006, net equity extraction from residential property had soared to nearly 9% of disposable personal income – fully three times the 3% reading only five years earlier. That enabled income-short American consumers not only to squander income-based saving but also to push consumption up to a record 72% of real GDP in 2007 (see Figure 2). Behind this outcome was the confluence of two monstrous bubbles – property and credit – that transformed residential dwellings into the functional equivalent of ATM machines. In the end, US consumers had no compunction about tapping their main source of future saving – housing wealth – to fund current consumption. And, of course, they went on a record debt binge to pull it off. Household sector indebtedness surged to 133% of disposable personal income by year-end 2007 – up over 40 percentage points from debt loads of 90% prevailing just a decade earlier. It was the height of folly. Yet the longer it lasted, the more it became deeply ingrained in the American psyche. And now it is finally over.

The Asia Connection

While seemingly made in America, the era of excess was truly global in scope. The US consumption binge was fodder to export-led economies elsewhere in the world. That was especially the case in Developing Asia – the fastest growing major region in the world since the turn of the century. Large enough to account for fully 20% of total world output (as measured on a purchasing power parity basis), real GDP growth in Developing Asia averaged 8% over 2000-07 – more than two and a half times the 3% growth trend elsewhere in the world over the same period. In search of rapid growth in order to achieve its development and poverty-reduction objectives, Developing Asia viewed America’s consumption binge as “manna from heaven.” Consumption deficient Japan had a similar response, as did the large newly industrialized economies in the region such as Taiwan and Korea.

Yet there can be no mistaking the high-octane fuel that drove the Asian growth boom – an increasingly powerful export-led growth dynamic. For Developing Asia as a whole, exports hit a record of more than 45% of pan-regional GDP in 2007 – up more than ten percentage points from the share prevailing in the mid-1990s (see Figure 3). That left the world’s fastest growing region more dependent on external demand than...
ever before. And with the American consumer – the biggest source of that external demand – finally in trouble, Asia’s export-led growth dynamic is now at risk.

Figure 3: Export-Led Developing Asia

As % of GDP

Exports
Consumption

80 82 84 86 88 90 92 94 96 98 00 02 04 06

Source: IMF, Morgan Stanley Research

With the American consumer now in trouble, Asia’s export-led growth dynamic is now at risk.

China is undoubtedly key in that regard. After two years of nearly 12% GDP growth in 2006-07, Chinese growth slowed to 10.1% in 2Q08. That downshift was largely an outgrowth of marked deceleration in the growth of Chinese exports to the US – +8% y-o-y in June 2008 following average annual gains in excess of 25% over the 2003-07 period. Significantly, the US-centric compression of Chinese export and GDP growth – hitting about 20% of China’s total external demand – was accompanied by ongoing vigor of China’s shipments to Europe (+25% in June 2008) and Japan (+22%). As Japan and Europe now weaken, the heretofore resilient pieces of Chinese external demand – collectively accounting for about 30% of China’s total exports – will also begin to falter. With lags, that could well prompt another downleg in Chinese GDP growth from 10% to 8% within the next six months.

A key question for Asia is whether an external demand shock will be sufficient to contain the region’s recent outbreak of inflation.

India has adopted a very different approach to deal with its inflation problem, with the central bank moving aggressively to boost policy rates by a total of 125 basis points since early June. Unlike China, who seems to be counting on an external demand shock to temper excessive GDP growth and inflationary pressures, the Reserve Bank of India is not taking any chances in confronting its inflation problem head on. As a result, Indian GDP growth could fall below the 7% threshold in 2009 – a major shortfall from average gains of nearly 9% over the preceding four years, 2005-08.

Japan brackets the other end of the spectrum in terms of Asia’s repercussions to a US-led external demand shock. Overall Japanese export volume growth went into negative territory in June (-1.6% y-o-y) for the first time in 16 months. At work in this case was emerging sluggishness in Japanese exports to Europe and elsewhere in Asia – once resilient markets that previously had been masking emerging weakness to the US. China and Japan are at the opposite ends of Asia’s external vulnerability chain. China has a huge cushion – nearly 12% growth over the past two years – to ward off the blow of an external shock. Japan, by contrast has been only a 2% growth economy in recent years and has no such cushion. In a weaker external demand climate, the downside to Chinese economic growth appears to be around 8%. For Japan, the downside is probably closer to “zero” – underscoring the distinct possibility of a recessionary relapse in the region’s largest economy.

The global boom of 2002 to mid-2007 was an outgrowth of the powerful cross-border linkages of globalization. No region of the world benefited more from this connectedness than export-led Asia. That has been especially the case in the region’s high-flying developing economies, dominated by China. Decoupling – the supposed untethering of developing economies from the developed world – is antithetical to the linkages that have become central to the powerful globalization trends of the past five years. Those linkages are
just as intact on the downside of the global business cycle as they were on the upside. And through well-developed cross-border feedback mechanisms, the responses to a major weakening in US demand by Asia’s export-led economies are now triggering powerful repercussions across markets and economies in an interdependent world.

Taking Stock
Alas, the bloom is now off the rose – the global business cycle has turned. World GDP growth, which averaged close to 5% annually over the 2004-07 period – the strongest four consecutive years of global growth since the early 1970s – now seems headed back down into the 3.5% to 4% range for a couple of years. While that is hardly a disastrous outcome, it does represent a 20-30% deceleration in the growth rate of the previous four years.

This likely downturn in the global business cycle has not occurred in a vacuum. It has been accompanied by unprecedented outbreak of credit market contagion that has wreaked havoc throughout world financial markets. The interplay between financial markets and the real economy undoubtedly holds the key to the global macro outlook over the next few years. For expositional purposes, I have found it helpful to break down the macro pyrotechnics into three stages (see Figure 4):

The credit crisis is the first stage. Sparked by the subprime meltdown that began in the summer of 2007, a cross-product contagion quickly spread to asset-backed commercial paper, mortgage-backed securities, structured investment vehicles (SIVs), interbank offshore (LIBOR) financing, leveraged lending markets, auction rate securities, so-called monoline insurers, and a number of other opaque products and structures. Unlike the Asian financial crisis of ten years earlier, which was a powerful cross-border contagion, the “originate and distribute” characteristics of today’s complex instruments and structures ended up infecting offshore investors as well. That puts the current crisis in the rarefied breed of being both cross-product and cross-border. US financial institutions generally have been aggressive in marking down the value of distressed securities. Largely for that reason, I believe that this first phase is about 65% complete – more behind us than ahead of us but still a good deal more to come as the business cycle now kicks in and produces yet another round of earnings impairment for financial intermediaries.

A three-stage interplay between financial markets and the real economy holds the key to the global macro outlook over the next few years.

The second stage reflects the impacts of the credit and housing implosions on the real side of the US economy. As noted above, the main event in this phase of the adjustment is the likely capitulation of the over-extended, saving-short, overly-indebted US consumer. For nearly a decade and a half, real consumption growth averaged close to 4% per year. As consumers now move to rebuild income-based saving and prune debt burdens, a multi-year downshift in consumer demand is now likely. Over the next two to three years, I expect trend consumption growth rate to be cut in half to around 2%. There will be quarters when consumer spending falls short of that bogey and the US economy lapses into a recessionary state. There will undoubtedly also be quarters when consumption growth is faster than the 2% norm and it will appear that a recovery is under way. Such rebounds, unfortunately, should prove short-lived for post-bubble American consumers. This aspect of the macro-adjustment scenario has only just begun. As a result, Phase II is only about 20% complete, in my view.

The third stage is a global phase – underscored by the linkages between the US consumer and the rest of the world. As also noted above, those linkages are only now just beginning to play out. Ordering and cross-border shipping lags suggest that this phase of the adjustment will take a good deal of time to unfold. Early impacts are already evident in China and Japan – largely on the basis of US-led export adjustments. With ripple effects now only beginning to show up in Europe, these cross-border impacts should gather in force over the months and quarters to come. That suggests to me that Phase III is only about 10% complete.

In short, this macro crisis is far from over. The main reason is that the bubbles that have burst – property and credit – became so big they ended up infecting the real side of the US economy. And as the US now adjusts to much tougher post-bubble realities, the rest of an interdependent, globalized world should follow. Moreover, there are undoubtedly
feedback effects between the various stages – especially as the business cycle now starts to bear down on financial institutions that were initially buffeted by the credit contagion. A new round of earnings pressures on banks and other lending institutions could exacerbate the credit crunch further, reinforcing the cyclical pressures on debt-dependent economies in the US and around the world. All in all, macro adjustments should last well into 2009 and possibly spill over into 2010.

Rebalancing the Hard Way

A voracious appetite for economic growth lies at the heart of the boom that has now gone bust. An income-short US economy rejected a slower pace of domestic demand. It turned, instead, to an asset- and debt-financed growth binge that had little to do with the time-honored underpinnings of income generation forthcoming from current production. For the developing world, rapid growth was a powerful antidote to a legacy of wrenching poverty. And the hyper-growth that was realized in regions like Developing Asia became the end that justified all means – including the negative externalities of inflation, pollution, environmental degradation, widening income disparities, and periodic asset bubbles. The world’s body politic wanted – and still wants – growth at all costs. But now the bill is coming due.

The global economy is facing a multi-year rebalancing as it now reins in its appetite for unsustainable hyper growth.

The global economy is facing a multi-year rebalancing. For the US, this spells a sustained deceleration in personal consumption growth as households abandon newfound asset-dependent saving and consumption strategies in favor of the income-led fundamentals of the past. Hope springs eternal that a weaker dollar will enable America to finesse this transition without skipping a beat – that consumer-led growth will now give way to currency-led export growth. Anything is possible, but I have my doubts of a US export renaissance – especially in the aftermath of a multi-decade hollowing out of America’s manufacturing and export base. Jobs and industries that were once “lost forever” do not spring back to life over night. The US, in my view, will now have to come to grips with a much slower growth trajectory – with real GDP growth likely to slow from the 3.2% trend of the past 13 years to no higher than 2% over the next 2-3 years, or longer.

This should prove to be a very challenging outcome for the rest of the world – especially for those developing nations, which have derived so much of their economic sustenance from exporting goods to over-extended American consumers. The task here is essentially the opposite of that which faces the United States – for export-led developing economies to shift the mix of growth toward domestic demand, especially private consumption. That won’t be easy for nations who have relied on cheap currencies, surplus saving, and infrastructure strategies as the principal means to achieve spectacular progress on the road to economic development. But with their major export market – the US – now under pressure and with little consumption offset likely elsewhere in the world, the developing world has little choice other than to embark on a consumer-led rebalancing of its own. This probably means slower economic growth in the developing world as well for the next several years – with the 7.3% average annual growth pace of the past years conceivably slowing into the 5% vicinity over the next 2-3 years.

Such global rebalancing arises from an unprecedented disparity that opened up over the past several years between nations with current account deficits and those with surpluses. By the IMF’s reckoning, the absolute sum of current account deficits hit a record of nearly 6% of world GDP in 2006-07 – fully three times the 2% share prevailing in the mid-1990s (see Figure 5). Where the apologists went seriously wrong, in my view, was not in coming up with new ways to rationalize unprecedented external imbalances but in failing to appreciate the impact of asset and credit bubbles in spawning these excesses. Now that those bubbles have burst, global rebalancing has become an urgent task for a lopsided world. And the global economy will undoubtedly pay a steep price for years of neglect by moving to a much slower growth trajectory in the years immediately ahead.
Financial Market Implications

The events of the past year have certainly not been lost on financial markets. As forward looking discounting mechanisms, much of the macro adjustments that have unfolded are now “in the price” of major asset classes. But denial remains deep as to the full extent of the adjustments. To the extent that there is more to come in the global economy, the same can be said for financial markets. Four key conclusions in that regard:

To the extent that there is more to come in the global economy, the same can be said for the broad classes of financial assets – equities, bonds, currencies, and commodities.

With equity markets now in bear-market territory in most parts of the world, it is tempting to conclude that the worst is over. I am suspicious of that prognosis. The trick, in my view, is to resist the temptation to view equity markets as a homogenous asset class. Instead, it is important to make the distinction between financials and nonfinancials. The former have certainly been beaten down. While the adjustments of Phases II and III as outlined above will undoubtedly put more cyclical pressures on the earnings of financial institutions, share prices now seem to be discounting something close to such an outcome. That is not the case for nonfinancials, however. For example, consensus earnings expectations for the nonfinancials component of the S&P 500 are still centered on prospects of close to 25% earnings growth over 2007-08. As US economic growth falters, however, I fully expect earnings risks to tip to the downside for nonfinancials – underscoring the distinct possibility of yet another important downleg in global equity markets. The equity bear market is likely to shift from financials to nonfinancials.

For bonds, the prognosis centers on the interplay between inflation and growth risks – and the implications such a tradeoff has for the policy stance of central banks. As inflation fears have mounted recently, yields on sovereign government bonds have risen as market participants have started to discount a return to more aggressive monetary policy stances of major central banks. In a faltering growth climate, however, I suspect cyclical inflation fears will end up being overblown and monetary authorities will turn skittish out of fear of overkill. Over the near term, that leads me to conclude that major bond markets could rally somewhat on the heels of a rethink of the aggressive central bank tightening scenario.

Over the medium term – namely, looking through the cycle – I concede that the jury is still out on stagflation risks, especially in inflation-prone developing economies. The bond market prognosis is more uncertain over that time horizon.

For currencies, the dollar remains center stage. I have been a dollar bear for over six years for one reason – America’s massive current account deficit. While the US external shortfall has been reduced somewhat over the past year and a half – largely for cyclical reasons – at 5% of GDP, it is still far too large. And so I remain fundamentally bearish on the dollar. At the same time, it appears that the dollar has overshot on the downside over the past 10 months on the fear that subprime is mainly a US problem. As the global repercussions of the macro crisis spread as outlined above, I believe that investors will rethink the belief that they can seek refuge in euro- and yen-denominated assets. As a result, I could envision the dollar actually stabilizing or possibly even rallying into yearend 2008 before resuming its decline in 2009 due to America’s still outsized current account deficit.

The commodity market outlook is especially topical these days. A year from now, I believe that economically-sensitive commodity prices – oil, base metals, and other industrial materials – will be a good deal lower than they are today. Soft commodities – mainly agricultural products – as well as precious metals could well be the exception to that outcome. Two reasons underpin the case for a correction in economically-sensitive hard commodities – a marked deceleration in global growth leading to a related improvement in the supply-demand imbalance, as well as a pullback in commodity buying by return-seeking financial investors. This latter impetus to the commodity bubble cannot be underestimated, in my opinion. I am not sympathetic to the view that hedge funds and other speculators have driven commodity markets to excess. At work, instead, are mainly long-only, real money institutional investors such as global pension funds – all of whom have been advised by their consultants to increase their asset allocations into commodities as an asset class. Such herd behavior of institutional investors invariably turns out to be wrong. I expect that to be the case this time as well – although I would be the first to concede that my own record in calling the end of this commodity bubble has been nothing short of terrible over the past three years.

Perpetuating the Madness?

For reasons noted above, the current financial crisis is hardly lacking in superlatives. Whether it is truly the worst debacle since the Great Depression, as many have argued, remains to be seen. But it is certainly a watershed event in many...
important respects – especially since it draws into sharp question the fundamental underpinnings of a US economy that has long ignored its imbalances and excesses. Sadly, America's body politic seems both unwilling and unable to fathom the magnitude of the problems that have come to a head in this crisis.

America's body politic seems unwilling to fathom the magnitude of the problems that have come to a head in this crisis. That's true of tax policy, the housing “fix”, and management of the financial system.

Tax policy is a case in point. Rebates to over-extended American consumers have been the first line of defense, and there is new talk in Washington of a second round of such stimulus measures. Yet with personal consumer spending hitting a record 72% of real GDP in 2007, the government’s injections of spendable income are aimed at perpetuating the biggest consumption binge in modern history. For a nation that desperately needs to save more and spend less – and thereby pay down debt and reduce its massive current account deficit – politically expedient personal tax cuts are the wrong medicine at the wrong time.

Washington’s response to the housing crisis is equally problematic. The Congress seems determined to make foreclosure containment a key aspect of any fix; moreover, new legislation provides government guarantees for up to $300 billion of home mortgage refinancing for low-income families. This is consistent with a philosophy that has long stressed ever-rising rates of homeownership as a key objective of US public policy. Yet truth be known, an obvious and painful lesson of the subprime crisis is that there are some Americans who simply cannot afford to purchase a home. Foreclosure is a tragic, but ultimately necessary, consequence of misguided home buying. For low-income victims of the housing bubble, assistance should be directed at income support rather than at perpetuating uneconomic homeownership. By opting for the latter, Congress is inhibiting the requisite decline in home prices that ultimately will be necessary to clear the market and bring the housing crisis to an end.

Nor have the financial authorities – the Federal Reserve and the US Treasury – distinguished themselves in this crisis. Ten years ago, it was a hedge fund (Long Term Capital Management) that was too big to fail. Now it is an investment bank (Bear Stearns) and the country’s twin mortgage behemoths (Fannie Mae and Freddie Mac). And the Fed’s temporary liquidity facility for primary dealers in government securities is now starting to look less and less temporary.

Undisciplined risk taking has been a central element of this crisis. By tempering the consequences of the bursting of the risk bubble, the authorities are shielding irresponsible risk takers and thereby enabling a “moral hazard” that has become increasingly ingrained in today’s financial culture. At the same time, a Federal Reserve that continues to ignore the perils of asset bubbles in the setting of monetary policy is equally guilty of reckless endangerment to the financial markets and to an increasingly asset-dependent US economy.

In short, Washington has responded to this financial crisis with a politically-driven, reactive approach. Policy initiatives have been framed more by the circumstances of the moment than by a strategic assessment of what it truly takes to put the US economy back on a more sustainable path. By perpetuating excess consumption, low saving, unrealistic goals of home ownership, and moral hazards in financial markets, this patchwork approach has the biggest flaw of all – it does little to change bad behavior. Far from heeding the tough lessons of an economy in crisis, Washington is doing little to break the daisy chain of excesses that got America into this mess in the first place.

If this crisis is anything, it is a wake-up call. For all too long, the United States broke many of the most important rules of conduct for a leading economy. It failed to save. It levered asset bubbles in both equities and homes to sustain unparalleled excesses in current consumption. It went deeply into debt to sustain that course of action and borrowed heavily from the rest of the world to close the funding gap. The authorities were complicit in this binge – especially a central bank that conditioned unbridled risk taking and excessive monetary accommodation.

The longer the United States sustained the unsustainable, the more it believed in the perpetuity of its charmed existence. The real message of this crisis is that this game is now over. But steeped in denial and feeling the heat of voters in a politically charged presidential election year, Washington politicians insist that the game can go on.

More than anything, America now needs “tough love” – a new course that owns up to years of excess and the remedies those excesses now require. It is not that difficult to fathom the broad outlines of what that new approach might entail – more saving, as well as more investment in both people and infrastructure. An energy policy might be nice as well – as
would be more prudent stewardship of the financial system. This program won’t win any popularity contests. But in the end, it is America’s only hope for a sustainable post-bubble prosperity.

**Lessons**

It didn’t have to be this way. America went to excess and the rest of an export-dependent world was more than happy to go along for the ride. Policy makers and regulators – the stewards of the global economy – looked the other way and allowed the system to veer out of control. Investors, businesspeople, financial institutions, and consumers were all active participants in the Era of Excess.

The key question going forward is whether an adaptive and increasingly interrelated global system learns the tough lessons of this macro upheaval. At the heart of this self-appraisal must be a greater awareness of the consequences of striving for open-ended economic growth. The US couldn’t hit its growth target the old fashioned way by relying on internal income generation, so it turned to a new asset- and debt-dependent growth model. Export dependent Developing Asia took its saving-led growth model to excess: Unwilling or unable to stimulate internal private consumption, surplus capital was recycled into infrastructure and dollar-based assets – in effect, forcing super-competitive currencies and exports to become the sustenance of a new development recipe.

Can the world learn the tough lessons of this macro upheaval? The US and China are likely to be key in this regard, and recent signs are not encouraging.

This crisis is a strong signal that these strategies are not sustainable. They have led to multiple layers of excess – underscored by a precarious interplay between internal and external imbalances within and between the world’s largest economies. It took unsustainable credit and risk bubbles to hold this system together in an unstable equilibrium. But now those bubbles have burst, unmasking a worrisome disequilibrium that demands a new approach to policy and an important shift in behavior by households, businesses, and financial market participants.

The early verdict on such a new approach is not encouraging. That’s especially the case in the US and China – the two key players of the new globalization. As noted above, Washington is reverting to timeworn recipes that perpetuate the excess consumption and moral hazard problems of the past decade.

And Beijing is sending new pro-growth signals that seem to back away from recent tightening measures – an especially disconcerting development in light of China’s ongoing problems on the inflation front. The body politic in both nations is clinging steadfastly to its core values – that rapid economic growth is the antidote to any and all problems. Concerns regarding the sustainability of that growth are being deferred to that proverbial “another day.”

Financial and economic crises often define some of history’s greatest turning points. They can be the ultimate in painful learning experiences. But there can be no escaping the urgent imperatives of learning these lessons and addressing the systemic risks that have given rise to the crisis. Such heavy lifting rarely sits well with the body politic. A path of least resistance is invariably selected that leads to more of a reactive response – the quick fix that tempers immediate dislocations but does little to tackle deep-rooted systemic problems. That’s the risk today. And if that’s where the Authorities end up, a globalized world will have squandered a critical opportunity to put its house in order. That would be the ultimate tragedy. If this crisis demonstrates anything, it’s that it only gets tougher and tougher to pick up the pieces in a post-bubble world.

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In the short space of a single decade, the world’s financial markets have had to face down two bouts of excessive indebtedness. In 1997-98 in Asia, a currency crisis, triggered by the realization of excessive debt in Thailand, Indonesia and South Korea spread like wildfire across key Asian economies. A decade later in the United States, unsupportable sub-prime mortgages and consumer borrowing finally cracked under the weight of accumulated debt, triggering a correction which has yet to conclude.

What does this say about the global financial system? In brief, the two events, both of which resulted from domestic excess, represent another finger pointing to the dawn of a multi-polar world in international finance. We no longer look to the institutions of the Bretton Woods era to supply the answer of last resort. Instead, we can see the effects of viable alternative paradigms, notably, the rise of sovereign wealth funds, particularly in Asia and the Middle East.

Sovereign wealth funds stepped into the breach that had opened up as a result of the West’s financial turmoil. Their early investments in blue-chip financials included Morgan Stanley, Citigroup and Merrill Lynch. Then, subsequent to JP Morgan’s absorption of Bear Stearns, these same funds began to diversify again, turning even more aggressively to alternative investments and less noticeably to public equity markets.

There is little question that these beneficiaries of high oil prices and large inflows of foreign investment are now “power brokers” in their own right with advantages as well as attendant risks. The McKinsey Global Institute report, The New Power Brokers: Gaining Clout in Turbulent Markets (July 2008), spells this out. At the same time, their new stature has implications for traditional institutional investors. Particularly large public pension funds now are asking themselves whether these “new kids on the block” are competitors or allies.

The answer, of course, is that they are both. The Pacific Pension Institute, whose core, institutional investor membership includes public pension funds such as CalPERS, CalSTRS, the Canadian Public Pension Investment Board, Second National Pension Fund, Sweden and China’s National Social Security Fund, also enjoys the membership of the Government of Singapore Special Investments. In July, PPI also invited a major Middle Eastern sovereign wealth fund into membership.

As sovereign wealth funds begin to move increasingly sizeable chunks of money around the world, their influence will grow and by extension, the immediacy of dealing with important policy considerations, domestically and in the countries designated to receive the foreign investment. At home, one of the generic questions for fund managers is whether the pressures they face are increasing in direct proportion to their rise in international visibility. And if these pressures increase, what can – and what do they do about it? On the other side of the equation, recipient economies which are built on open markets and transparency, must determine whether the sovereign funds’ varying degrees of disclosure are sufficient to stave off unnecessary and harmful protectionism.

A crossroads lies ahead for the global economy. The ranks of institutional investors are broadening to include the China Investment Corporation along with other major sovereign wealth funds. This has implications on a number of fronts. Clearly, these players already are
part of the calculus of a solution. Still, the question remains as to how they can best be part of a sustainable solution and if/when appropriate, how can they most effectively be encouraged to remain a constructive part of the solution.
I. The development of Chinese individual housing loan market

1. The overview of Chinese individual housing loan market

Currently, Chinese individual housing loan is mainly composed of two types of loans: housing loans issued by commercial banks and accumulation fund loans issued to special house buyers by accumulation fund centers. What’s more, the former type can be furtherly classified into two types. One is the individual housing loans under the authorization of the housing accumulation fund centers. Banks will avail themselves of the housing accumulation fund deposits to issue housing loans to general house buyers upon related government rules and regulations. The other type is banks’ housing loan on their own account. In this case, banks usually rely on their own funds to satisfy the credit demand of borrowers.

After decades of development, Chinese commercial banks now mainly provide the following types of individual housing loan: new house loan, second-hand house loan, commercial house loan, self-built house loan and housing refurbishing and consumption loan. New house loan refers to the loan used to purchase new houses built and sold (or open to booking) by real estate development enterprises. Second-hand house loan refers to the loan used to buy second-hand houses which can be legitimately transacted in the secondary market. To be specific, the owner of the second-hand house must have acquired its property ownership certificate and are entitled to sell them. Commercial house loan refers to the loan used to purchase houses for commercial or business purposes. Self-built house loan refers to the loan provided to the borrowers to build their own houses. Housing refurbishing and consumption loan refers to the loan for refurbishing houses or related consumption.

Housing accumulation fund loan refers to the special housing consumption loan provided to any employee who participates in the housing accumulation fund system. It takes the housing accumulation fund as its capital source and aims exclusively at satisfying borrowers’ demand of purchasing, building, rebuilding or overhauling house for their own residence purpose. Housing accumulation fund loan is limited to urban residents who pay the public accumulation fund and its rate is lower than commercial loan rate. Each city has its own line of credit and imposes the upper on the loan. According to the government’s regulations, the housing accumulation fund has to be issued and managed by certain qualified commercial banks (usually the four major state-owned banks or the branches of state-controlled commercial banks) authorized by local housing fund management centers. Since the commercial banks do not undertake related loan risks, the housing accumulation fund loan is regarded as the agency business of commercial banks and also called housing loan on authorization.

If a buyer’s quota of accumulation fund loan is insufficient to pay for the house, he can also apply to commercial banks for commercial housing loans to fill the gap. This kind of loan is called individual housing loan portfolio.

By the end of 2007, the balance of individual housing loan registered 3.01 trillion yuan in the national banking system and that of the four major state-owned commercial banks was 2.06 trillion yuan. At the same time, the national loan balance of individual accumulation fund came to 507.43 billion yuan. Among them, China Construction Bank and China Industrial and
Commercial Bank issued 242.3 billion yuan and 82.5 billion yuan worth of individual accumulation fund loan respectively, together making up 64% of the total loan balance.

2. Operational institutions in the individual housing loan market

Chinese individual housing loan institutions gradually took shape and developed on the basis of previous financial institutional system and in line with the deepening of housing reforms. In 1987, China conducted housing reforms in many pilots throughout China and authorized China Construction Bank, the bank specialized in infrastructure construction, to explore and gradually initiate the operation of individual housing loan. Before the 1990s, almost all the policy-based individual housing loans were exclusively issued by China Construction Bank which also pioneered commercial individual housing loan. It is till the beginning of 1990s that China Industrial and Commercial Bank also started to provide policy-based individual housing loan and other commercial banks successively acquired the agent right of issuing similar loans after the mid of 1990s.

At the beginning of the 1990s, China Construction Bank and China Industrial and Commercial Bank successively established specific housing loan departments in branches so as to facilitate the housing reform. Ever since the mid of 1990s, these housing loan departments introduced the individual housing loan for residents, gradually transforming themselves into commercial institutions. In 1994, the housing accumulation fund system was extended throughout China and the State Council issued the Regulations on the Administration of Public Accumulation Funds for Housing in 1999, which in turn changed commercial banks’ policy-based housing financing business into the agency business of collecting housing accumulation fund and issuing housing accumulation fund loan. After granted the agent right of issuing housing accumulation fund loan, the four major state-owned commercial banks dissolved those policy-based housing financing department and further divided previous individual housing loan business into two parts: issuing housing accumulation fund loan as an agent and providing individual housing loan on their own account, with the latter becoming more and more important. After 2000, almost all the commercial banks are capable of providing individual housing loan.

At present, Chinese individual housing loan institutions are classified into two types: major commercial banks which provide commercial individual housing loan; housing accumulation fund management centers which provide policy-based individual housing loan. Chinese individual housing loan market is composed of two pillars of commercial system and policy-based system. The two systems integrate with each other and the former plays a dominant role. To be specific, the policy-based credit centers on housing accumulation fund loans and the commercial credit centers on commercial loans.

So far China has three housing savings banks successively. In order to facilitate the housing reforms, Yantai and Bangpu were selected as pilots and established Yantai Housing Savings Bank and Bangpu Housing Savings Bank as the subsidiary financial institutions. But the two banks were small in scale and exerting limited influence in its field. Then in 2000, Bangpu Housing Savings Bank merged with local urban credit cooperative and became Bengpu Municipal Commercial Bank. Yantai Housing Savings Bank also was transformed into a national joint-stock commercial bank as Evergrowing Bank Co. Ltd. after July 29, 2003. While domestic housing savings banks underwent changes, large foreign banks were making lots of time and efforts to squeeze into this market. On February 15, 2004, China Construction Bank co-invested with German Schweibill Housing Savings Bank and established the Sino-German Bausparkasse (SGB) in Tianjin. SGB’s registered capital was 150 million yuan while China Construction Bank and German Schweibill Housing Savings Bank held 75.1% and 24.9% of shares respectively. This is currently the only housing savings bank in China and China Construction Bank works as
the real holding bank. According to current Chinese policies, only commercial banks can get access to the individual housing loan market and the development of other professional individual housing loan institutions are thus strictly restrained. In fact, non-banking individual housing loan institutions are not allowed to operate in the market at all.

Except for four major state-owned commercial banks, all the joint-stock commercial banks and urban commercial banks have undoubtedly given priority to individual credit business, particularly individual housing loan, whose market share keeps expanding year after year. In addition, foreign banks also achieve a vigorous progress in their individual housing loan business since they entered China. Once monopolized by a few banks, the individual housing loan market is witnessing intense competitions among a large number of banks who struggle to expand their share in the individual housing loan market. Table 1 summarizes the individual housing loan balance and market share of the four major state-owned commercial banks between 2005 and 2007. Currently these four banks still play a dominant role in the whole banking system and their loans make up as high as 68.32% of the whole housing loan at the end of 2007.

Table 1: Individual housing loan balance and market share of the four major state-owned commercial banks between 2005 and 2007
Unit: 100 million yuan, %

<table>
<thead>
<tr>
<th>Item</th>
<th>By the end of 2005</th>
<th>By the end of 2006</th>
<th>By the end of 2007</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Term End Balance</td>
<td>Share of Balance</td>
<td>Term End Balance</td>
</tr>
<tr>
<td>Total</td>
<td>13768.25</td>
<td>100.00</td>
<td>16071.63</td>
</tr>
<tr>
<td>ICBC</td>
<td>4457.83</td>
<td>32.38</td>
<td>4744.28</td>
</tr>
<tr>
<td>ABC</td>
<td>2546.04</td>
<td>18.49</td>
<td>2740.55</td>
</tr>
<tr>
<td>BC</td>
<td>2903.55</td>
<td>21.09</td>
<td>3749.29</td>
</tr>
<tr>
<td>CCB</td>
<td>3860.83</td>
<td>28.04</td>
<td>4837.51</td>
</tr>
</tbody>
</table>

3. Chinese laws and regulations of individual housing loan market

Chinese commercial banks have to abide by both China’s fundamental laws and rules of relevant regulatory authorities. Currently it is mainly People’s Bank of China (PBC) and China Banking Regulatory Commission (CBRC) that are responsible of monitoring commercial banks’ individual housing loan business on their own accounts. As far as the accumulation fund loan is concerned, it is subject to not only the regulation of the above two institutions but rules of national and local construction authorities. National policies mainly prescribe the percentage of down payment (loan to value), loan rate, time of issuing future property loan, housing loan for the second (or more) houses and income/repayment ratio. These regulations vary at different time and elaborate the bottom line for commercial banks in expanding their individual housing loan business. All the commercial banks formulate detailed policies and rules for the individual housing loan business based on their business orientation and risk preference, of course within the boundary of the government’s regulations and policies. To be specific, now Chinese regulatory authorities mainly impose following strict requirement on commercial banks’ individual housing loan business.

(1). Loan to value (percentage of down payment)
In August 1995, PBC promulgated Provisional Measures on Administration of Commercial Banks’ Housing Loan on Their Own Account and stipulated that borrowers’ bank savings should be no less than 30% of the house price.
On April 28, 1997, PBC promulgated Administration of Individual Housing Mortgage Loan and stipulated that, when house buyers opened savings accounts or paid housing accumulation funds in commercial banks or housing savings banks, their saving deposits had to be no less than 30% of the total house price and was used as the down payment. In 1997, China promulgated Administration of Individual Housing Loan and stipulated those who are not entitled to housing subsidies should pay at least 30% of the total house price as the down payment, while those who are entitled to housing subsidies should pay at least 30% of the house price which is supposed to be paid by themselves as the down payment. In 1999, PBC promulgated Some Opinions on Encouraging Consumption Loans and decreased the percentage of down payment from 30% to 20%.

On March 17, 2005, PBC issued Notice of Adjusting the Housing Loan Policies and Excess Reserve Interest Rate of Commercial Banks ([2005] No.61) and stipulated that in regions with fastest housing price growth, the percentage of down payment should increase from 20% to 30% and commercial should define by themselves such regions according to local housing price level. In 2006, altogether nine ministries and commissions put forward Opinions of Adjusting Housing Supply Structure and Stabilizing the Housing price and stipulated borrowers should put down at least 30% of the total house price as the down payment. In consideration of the housing demand of low and middle-income people, the government also stipulated that as for the house which was no more than 90 square meters and for self-residence, their payment was still set as 20% of the house price.

(2). Loan rate

In August 1995, PBC launched Provisional Measures on Administration of Commercial Banks’ Housing loan on Their Own Account and stipulated that if the borrower could start the repayment from the second month after he got the housing loan, banks could offer preferential loan rate. To be specific, as for 5-year housing loan, the borrower could enjoy the 3-year loan rate on fixed assets. As for loans whose terms range from 5 to 10 years, the borrower could enjoy the 5-year loan rate on fixed assets. As for loans over 10 years, the borrower can get the contract rate for fixed assets loans over 5 years.

On April 28, 1997, PBC promulgated Administration of Individual Housing Mortgage Loan and stipulated that 5-year loan enjoys the 3-year fixed assets loan rate. As for loans whose terms range from 5 to 10 years, the borrower can enjoy the 5-year loan rate on fixed assets. As for loans over 10 years, the borrower can get discounted 5-year fixed assets rate of fixed asset and the discount should not exceed 5%.

In 1997, China promulgated Administration of Individual Housing Loan and stipulated that all the individual housing loan rates decreased to a lower level in turn (floating rate was not included).

On September 21, 1999, PBC decided to cut down the highest rate from 6.3315% to 5.58% and then further decrease the loan rates by 10% at each level.

Before announcing this adjustment, PBC had been implementing special rate for housing loans which was lower than the term rate.

In 2003, PBC issued the Notice of Further Strengthening the Housing Loan Business and imposed different loan rates on different types of loans. The housing loan for the second or even more property adopted the term rate. As for the housing loan for up-market commercial houses, villa or the second (even more) property, their borrower could no longer enjoy the preferential loan rate.
On March 17, 2005, PBC issued Notice of Adjusting the Housing Loan Policies and Excess Reserve Interest Rate of Commercial Banks ([2005] No. 61) which abolished the preferential housing rates and replaced them with commercial loan rates. Their upper limit was left open and lower limit was 90% of the benchmark rate at the same level. In the past, the loan interest was usually settled every year, but now the borrower and lenders could either negotiate monthly, quarterly and yearly loan rate based on commercial principles or adopt fixed rate once and for all. This was regarded as a reform over the housing loan rate management regime, which unified both housing loan rate and other loan rates. On August 18, 2006, PBC issued the Notice of Adjusting the Benchmark Interest Rate of Financial Institutions ([2006] No. 289) and declared to forge ahead the marketization of commercial individual housing loan rate. Its lower limit was expanded to 0.85% of the benchmark rate at the same level, while other commercial loan rates maintained their lower limit as 90% of the benchmark. PBC further lowered the housing loan rates, making them distinctive from other loan rates.

(3). Loan term
On April 28, 1997, PBC issued the Provisional Measures on Administration of Commercial Banks’ Housing loan on Own Account and Administration of Individual Housing loan allowed borrowers to reasonably extend the loan term but within 20 years. On September 21, 1999, PBC decided to extend the maximum loan term of commercial banks’ individual housing loan from 20 years to 30 years.

(4). Time of issuing future property loan
The regulatory authorities did not define specific time of issuing housing loan on future property until 2001. In the past, banks tended to issue loans at the time when houses began to be sold. In 2001, PBC issued Notice of Standardizing Housing Financial Business and forbade issuing “zero down payment” housing loan. The borrowers cannot get the loan for future property until the structural roof-sealing for multistoried houses or two thirds of gross investment of high-rise houses was completed. The LTV (loan to value) of commercial housing mortgage should not exceed 60% and the loan term should be within 10 years. Besides, the commercial house to be purchased must not be future property. In 2003, PBC launched the Notice of Further Strengthening the Housing loan Business and demanded commercial banks to further expand the coverage of individual housing loan and have more people benefit from bank loans. In order to free borrowers from paying for unnecessary interest, commercial banks only agreed to provide individual housing loan to those houses whose structural roof-sealing was completed.

(5). Percentage of down payment and loan rates of housing loan for the second (or even more) property
A. The percentage of down payment for housing loan of the second (or more) property. PBC set up the lowest percentage of down payment as 20% after 1999. In 2003, PBC explicitly said in its Notice of Further Strengthening the Housing loan Business that house buyers would made a down payment of 20% for their first house, but the percentage of down payment should be lifted appropriately for their second or even more houses. On September 27, 2007, PBC and CBRC issued the Notice of Strengthening the Management of Commercial Housing Industry and stipulated that as for the borrowers who had bought house on mortgagee and continued to apply for housing loan for the second (or more) property, they had to make a down payment of no less than 40%. In other words, the more houses the borrowers had, the higher the percentage of down payment would be.

B. Loan rate for borrowers with many properties
PBC didn’t distinguish the rate of multiple properties from that of the first property until 2003 when it issued Notice of Further Strengthening the Housing loan Business and stipulated that
borrowers had to accept the term rate for their second (or more) property and borrowers of up-market commercial houses, villa or the second (or more) commercial house could not enjoy the preferential rate. On March 17, 2005, PBC launched Notice of Adjusting the Housing Loan Policies and Excess Reserve Interest Rate of Commercial Banks ([2005] No.61) and replaced the preferential rates with commercial rates. This policy did not distinguish loan rates by the number of houses owned by the borrowers. On September 27, 2007, PBC and CBRC issued the Notice of Strengthening the Management of Commercial Housing Industry and stipulated that as for the borrowers who had bought house on mortgagee and continued to apply for housing loan for the second (or more) property, their loan rate was 110% of the benchmark rate at the same level. In other words, the more houses the borrowers had, the higher the loan rate would be.

4. The quality and benefit of individual housing loan assets
   (1) The quality of individual housing loan assets
   Currently, the individual housing loan provided by Chinese commercial banks has following four features. One, the loan is exclusively used to purchase or build houses so it can be regarded as the most reliable value-secured investment. Two, the loan allows borrowers to use the house to be purchased as the mortgage while houses are the best mortgage asset. Three, borrowers accept unlimited liabilities of repayment. Four, it is designed scientifically. Borrowers can pay their mortgage in installment, so their loan risk gradually decreases with time. In one word, individual housing loan features lowest risk and best benefit among all the loans. The bad loan rate of China Industrial and Commercial Bank was only 1.01% by the end of 2007 and that of China Construction Bank registered 1.91% and 1.37% in 2005 and 2006 respectively, which even declined in 2007. However by the end of 2007 the bad loan rate of Chinese commercial banks (including state-owned commercial banks, joint-stock commercial banks, urban commercial banks, rural commercial banks and foreign banks in China) was 6.17%. Figure 1 compares the bad loan rates between individual housing loan and all the loans in China Industrial and Commercial Bank between 2001 and 2007. Obviously there is a huge gap between them.

Figure 1: Comparison of bad loan rates between individual housing loan and all the loans in Industrial and Commercial Bank of China between 2001 and 2007

<table>
<thead>
<tr>
<th>Year</th>
<th>Individual Housing Loan (%)</th>
<th>All Loans (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>25.00</td>
<td>35.00</td>
</tr>
<tr>
<td>2002</td>
<td>20.00</td>
<td>30.00</td>
</tr>
<tr>
<td>2003</td>
<td>15.00</td>
<td>25.00</td>
</tr>
<tr>
<td>2004</td>
<td>10.00</td>
<td>20.00</td>
</tr>
<tr>
<td>2005</td>
<td>5.00</td>
<td>15.00</td>
</tr>
<tr>
<td>2006</td>
<td>10.00</td>
<td>5.00</td>
</tr>
<tr>
<td>2007</td>
<td>15.00</td>
<td>10.00</td>
</tr>
</tbody>
</table>

Source: statistics online
(2) The benefit of individual housing loan

According to current policies, the loan rate of the first self-owned house can float by 15% lower than the benchmark rate of PBC, featuring the largest discount among all the rates. However, other types of housing loan will float by 10% above the benchmark. Although it is hard to judge the benefit of individual housing loan only by its interest rate, its comprehensive benefit is obviously higher than any other loan if such factors as interest revenue, cost, provision against risks and capital occupancy are taken into consideration. According to the formula in New Basel Agreement of Venture Capital, individual housing loan is a kind of low-risk product that occupies less capital.

It is calculated that in 2007 the return rate for commercial banks’ individual housing loan registered around 5.82% but its return on invested capital was as high as around 35%. During the same period of time, the return rate of corporate loans was only 25%. So the average return of individual housing loan is about 10% higher than the corporate loan.

II. Evaluation of the development of Chinese individual housing loan market

1. Chinese individual housing loan market was still at the preliminary stage

Currently the proportion of people who buy houses on mortgage is fairly small in China. By the end of 2007, 3.17 million people got their individual housing loans from China Industrial and Commercial Bank. Since China Industrial and Commercial Bank accounted for 20.2% of the national individual housing loan, it is deduced that around 15.69 million people applied for housing loan in China in 2007, only made up 1.72% of Chinese people between age 15-59 and 2.64% of total urban population.

Despite a remarkable annual growth since 1998, the scale of China’s individual housing loan is still far smaller than that of developed countries. By the end of 2007, the total individual housing loans provided by Chinese-funded financial institutions totaled 3.01 trillion yuan, making up 12.2% of Chinese GDP, but developed countries obviously have a much higher proportion in this regard. In 2001, the amount of real estate mortgage averaged 39% in European countries, 47% in Germany, 60% in British and 74% in Holland. In addition, Chinese individual housing loan also made up a small proportion against other loans. By the end of 2007, Chinese total individual housing loan accounted for 11.5% of total RMB (26.17 trillion yuan). However in developed countries and regions, the housing loan always accounted for more than 30% of the total loans in large comprehensive banks.

What’s more, Chinese individual housing loan also features regional disparity. By the end of 2007, Eastern China, Middle China and Western China accounted for 71.09%, 13.84% and 15.06% of total housing loans in China Industrial and Commercial Bank respectively. Each of its 7 branches in Canton, Jiangsu, Zhejiang, Shanghai, Beijing, Shandong and Shenzhen had over 30 billion yuan of individual housing loan balance, totaling 57.22% of all the 35 branches. Besides, its branches in Hebei, Guangxi, Anhui, Sichuan, Henan, Jiangxi, Chongqing and Hubei had 12-30 billion yuan of individual housing loan balance respectively, altogether making up 21.91% of the total housing loans. In other words, the other 20 branches only accounted for 20% of total individual housing loans.

At present, around 60% of individual housing loans in China Industrial and Commercial Bank concentrate in around 8 branches in the Eastern China while its branches in Northeast and Northwest regions make relatively lower progress, which results in regional disparity of housing loan business.
2. The management of individual housing loan market is not advanced enough
   Since Chinese individual housing loan business just takes off, the regulatory authorities have been sticking to relatively strict restrictive policies over it although they are trying to relax them gradually. They have multiple regulatory targets but their administrative measures turn out to be simple and inflexible.

   (1). The government has multiple regulatory targets. The individual housing loan is a part of banking loan business so the primary target for financial regulatory departments should be to control the market risk and operational risk. In fact, China’s focus of regulatory management targets vary over times, while controlling loan risk is just one of them. In most cases, the government regards the individual housing loan policies as an important instrument in accelerating or decelerating industrial development, pushing forward or restraining housing price and even solving residents’ housing problem. However, once the government has multiple regulatory targets, this is actually not conducive to the development of individual housing loan market because the micro-economic policies can be a “double-edged sword” when they are used for macro-economic control. For instance, the government finds it hard to regulate residents’ housing demand by tightening or loosening the housing loan policies, because it is almost impossible to effective distinguish the real housing demand of house buyers from their demand of investment or speculation. Some tightened policies of the central bank will first of all exert negative impact on the potential house buyers with real demand of residence, instead of realizing their original purpose of restricting speculators. In addition, individual housing loan is the major contributor of the demand of purchasing houses. Although curbing housing loan can effectively dampen the demand of purchasing houses, it also dampens the expectation of housing supply, which in turns represses both housing demand and supply. As a result, the government should shift its administrative target to controlling the housing loan risk so as to guarantee the safety of main bodies in the individual housing loan market as well as the efficiency of the loan market.

   (2). The administrative means of regulatory authorities are simple and inflexible. The administrative efforts of PBC and CBRC are mainly reflected in their control of LTV, credit rate, time of issuing future property loan and income/repayment ratio. All the commercial banks have to strictly adhere to these rules and otherwise they will be severely punished. The government essentially introduces regulatory measures to meet the need of macro-economic control, only to put the target of risk control and risk compensation to a lesser position. For example, now the loan for the first property enjoys the lowest rate, 85% of the benchmark rate, while that of the second property rises to 110% of the benchmark rate. The two types of housing loans essentially are faced with the same risk but imposed different loan rates. It is the same with LTV which cannot reflect the requirement of commercial banks to manage real loan risks. In addition, income/repayment ratio is a crucial indicator when commercial banks investigate borrowers’ repayment capability. Now the regulatory authorities stipulate that this ratio should be no less than 50%, which turns out to be pretty stiff because the income gap among borrowers may be extremely huge and what borrowers can provide is just last year’s income certificate. It is not practical to have this certificate to represent borrowers’ income over the next two or three decades. Similarly, some other official regulations on individual housing market also contradict with borrowers’ expectation of multi-layered and diversified banking loan services. In a word, the government’s requirements over LTV, loan terms, amount of loan, loan rate, mortgage and insurance mostly turn out to be inflexible.

3. The outer market environment for individual housing loan market is not mature enough
(1) Inadequate social security system restrains residents’ liabilities demand. Currently, most of Chinese residents are not certain about their future income. In face of the inadequate social security system, people have to, to a large extent, rely on their own savings to secure their future life, particularly their retired life. Under such circumstances, home buyers are not sure whether they are able to afford due repayment, which potentially dampens their demand for housing loans.

(2) China is lacking in personal credit system. The personal credit system refers to the system that assesses, records and files the rating of personal credit based on their household income, assets, and record of lending, repayment as well as credit facility so as to facilitate credit suppliers to decide whether to provide borrowers with loans or how many loans are available to them. At present, Chinese social credit rating system just makes a start. PBC has established credit information collection systems both for enterprises and individuals, which in fact can only provide borrowers’ record of saving and loan and fail to depict a comprehensive picture of borrowers’ credit rating.

At the same time, Chinese credit information collection industry is still underdeveloped. It is incapable of investigating residents’ credit standing or evaluating Industries. What’s more, in spite of the development of many private agencies, the credit reporting agencies as a whole are small in scale with narrow business scope. In a word, they cannot meet the requirement of growing individual housing loan market.

(3) China has not established adequate legal systems in terms of individual loans. Since Chinese consumption credit market is still at the preliminary stage of development, it lacks necessary laws and regulations to standardize the transaction between borrowers and lenders. For example, China hasn’t enacted any special laws for credit activities of natural persons. In fact, the original purpose of most so-called individual credit laws is to standardize enterprises’ production-oriented loans and there are not any comprehensive laws to standardize individual credit. For instance, so long as borrowers satisfy certain conditions defined by the Ministry of Finance, they are allowed to write off loans and accordingly forgive their liabilities. Since China has not set up the personal bankruptcy system and correspondent social security system after the bankruptcy, neither banks nor borrowers dare to involve in loans related to this issue. In addition, due to vague definition in relative laws, banks are unable to claim the rights to mortgages even when the debtors default their loans. In other words, the mortgage cannot compensate for the debt of borrowers.

China hasn’t introduced laws to punish borrowers’ credit-absence behavior. Due to lack of punishment mechanism, borrowers may find liability evasion only requires an extremely low cost and might even yield high returns. As a result, such phenomena as debt repudiation, debt evasion and debt avoidance are rampant in China. In addition, some people’s successful experience of debt evasion will induce others to follow them.

In face of insufficient laws and regulations, banks have to rely on strict lending conditions, lowered line of credit and shortened loan term to raise the lending cost so as to avoid or reduce loan risks. This will undoubtedly curb people’s loan demand in an unreasonable way and thus hinder the health development of individual housing loan market.

(4) The government fails to provide satisfactory services for the development of individual loan market.

Individual housing loan usually features wide coverage, huge numbers, small amount and long term and is seriously influenced by government’s policies. The loan transaction is not
just between lenders and borrowers. Instead, it usually involve such departments and agencies as residential and housing management, mortgage registration, asset evaluation, insurance, housing agencies, lawyers and public notary. In addition, since the majority of the individual housing loans are for the future property, the real estate development companies also play an indispensable role in it. As a result, since lots of parties are involved in the whole process of issuing/getting individual housing loan, it is highly likely that such problems as poor coordination, insufficient service, low efficiency, high service fees, deficient laws and regulations exist and affect the health development of individual housing loan market.

(5) False mortgage inflicts considerable losses on lending banks.

The real losses of bad housing loans are relatively low in China and false mortgage accounts for over 80% of it. In most cases, false mortgage is closely related with real estate developers who ask their employees or other people to disguise as home buyers and swindle housing loans from banks. The deep-rooted cause for this phenomenon is that developers are not sufficiently financed or suffer from sluggish sales, thus trying to take advantage of mortgage fraud to sell more houses or push forward housing price an ultimately bail themselves out. False mortgage is usually conducted in the following ways. One, developers repeatedly sell the houses which have been sold out and then cheat or collude with house buyers to apply for housing loans from banks. Two, developers deliberately jack up housing price to swindle more housing loans. Three, developers falsely sell those houses which, due to various reasons, are not able to be sold through normal channels and then ask false house buyers to apply for housing loans. It is obvious that there are three regulatory drawbacks that make false mortgage possible. In the first place, inadequate regulation for the housing pre-sale allows real estate developers to successfully sell the houses which are not eligible for selling (including the trick of repetitive selling the same house). In the second place, inadequate regulation in monitoring developers’ sales revenue allows developers to get financed from false sales. In the third place, the lack of necessary legal punishment allows developers to cheat banks at a fairly low cost and even get windfalls from it.

4. Inadequate operational/management system of individual housing loan market

(1). The market access is under strict control.

PBC explicitly stipulated that Administration of Individual Housing Mortgage Loan only applied to commercial banks and housing savings banks approved by PBC. In other words, there are only two types of institutions which can issue individual housing loan legally, namely commercial banks and housing savings banks. There are successively three housing savings banks in China.

However in foreign countries, lots of non-banking agencies, besides banks, are also allowed to provide individual housing financing services. For example, in America, professional housing financing agencies, commercial banks, insurance companies and some organizations all can run individual housing loans. In addition, American government has established FHA and VA to provide guarantee for individual housing loans. At the same time, FNMA and GNMA can work as intermediary agencies for the secondary individual housing loan market.

Instead, China permits to establish neither non-banking individual housing financing agencies nor related professional organizations. However, since the individual housing loans ask for lots of professional knowledge, the development of related professional organizations is bound to enhance the efficiency of the individual housing loan market, decrease transaction cost and enhance the risk control.

(2). The secondary individual housing market is still virgin ground in China
Chinese government should usher more individual and institutional investors into the housing loan market by means of securitizing housing mortgage loan, forging ahead the development of the secondary market for individual housing loan and introducing innovative financial instrument, which is conducive to expanding the capital source of housing mortgage loan and dispersing related loan risks.

Now Chinese commercial banks are not so enthusiastic about the above issues, particularly the four major state-owned banks which dominate the whole credit market, simply because they have excess liquidity and a huge amount of idle capital, therefore not motivated to absorb high-cost capital from the secondary market to satisfy their borrowers. The secondary market will not take shape and gradually prosper until more small and medium-sized banks enter the individual housing loan market and regulatory authorities allow the existence and development of individual housing financing agencies.

(3). Chinese individual housing loan market is plagued with underdeveloped service and supporting system.

The process of issuing individual housing loan, such as credit information collection, evaluation of mortgage, housing mortgage insurance, credit guarantee, capital supervision and post-credit tracking, will involve a large number of institutions like insurance companies, guaranty companies, rating agencies and law firms. Such intermediary business as property evaluation, housing and loan consultancy, collection and payment agency, insurance agency and property registration agency derived from housing loan business, particularly individual housing loan business, are expected to make a remarkable progress when Chinese individual housing loan market moves forward. Currently the professional agencies aiming at providing specific services for individual housing loan are scattered in the market and haven’t given birth to a comprehensive and complete industry.

III. The development trend of China’s individual housing mortgage market

In 2008, Chinese increasing national economy and accelerating urbanization will continue to drive the housing industry to more forward. However, tightened national macro-economic control may exert short-term impact on it. In consideration of these two influences, it is expected that Chinese individual housing loan market will show following trends of development.

1. The individual housing loan market generally maintains a growing momentum while its loan growth slows down.

China has launched a series of measures to control housing price in recent years and further intensifies its efforts in addressing the problems of housing sector this year. All these measures have led to a substantial decrease in the volume of housing transaction and decelerated the growth of housing development and investment, which will inevitably affect the individual housing loan market. PBC’s statistics show that in the first half of 2008, the additional individual housing loan of all the banks amounted to 181.84 billion yuan, increasing by 6.04% compared with the beginning of the year, while in 2007 the additional individual housing loan was 761.45 billion yuan over the same period of time, up by 33.8%. Ever since the beginning of 2008, the individual housing loan has conspicuously decelerated its growth and this situation is expected to last in the near future. Chinese housing industry will maintain a growing momentum in 2008 but grow at a lower speed than 2007.

2. The risk of individual housing loan is still under control

There are potentially unlikely that Chinese housing price as a whole will decrease substantially in 2008. Although some regions may experience a price drop at certain time, the
structure of individual housing loan still enables the banks to have abundant mortgage
guarantee and related loan risks are thus under control. By the end of 2007, the loan contracts
whose LTV is no more than 70% accounted for 85.69% of the total loan contracts and 82.14%
of loan balance. The loan contracts whose LTV is between 50% and 60% amounted for 18.10%
of total loan contracts and 16.77% of loan balance. The loan contracts whose LTV is between
60% and 70% amounted to 44.35% of total loan contracts and 48.63% of the loan balance.
International Monetary System and Global Economic Imbalance
Zhu Dantao
Development Research Center, the State Council

Ever since the mid and late 1990s, the majority of global current account deficit has concentrated in America while lots of global current account surplus gone to East Asia. The deepening and expanding global economic imbalance gradually becomes the focus of disputes. The major task of researches on global economic imbalance is to find out the causes of this phenomenon and we believe these researches should not only focus on such factors as investment, savings, exchange rate and import/export but try to find out the deep-footed causes so as to get a comprehensive and penetrating understanding of the global economic scenario. This paper aims at exploring the institutional cause behind the economic imbalance from the aspect of asymmetric international monetary system because this factor is related to the fundamentals of global economic imbalance and is expected to affect it in the middle and long term.

I. Current global economic imbalance: history repeats itself

There are two issues central to the international monetary system. One concerns the identification of international standard currency for international liquidity. The other is the international payment coordination mechanism centering on the international standard currency. The first issue is obviously more important because the identification of international standard currency, to a large extent, decides on the nature of international payment coordination mechanism. To be specific, should the coordination mechanism be automatic or policy-based? Should it take a responsibility-sharing form or non-responsibility-sharing form? When a country is closed to the outside world, it has no need for international standard currency. In other words, a country’s demand for international standard currency is closely related to its expanding international economic and financial transaction. However, which currency is selected as the international standard currency depends on the interaction of different market forces as well as the relative strength among countries’ political and economic forces.

The international community used to take tangible goods to serve the function of international standard currency, but this turned out to be deficient because on the one hand, infinite global economic growth as well as infinite international trade and financial transaction lead to infinite demand for means of international liquidity, which is undoubtedly unable to be satisfied by limited supply of any tangible goods, on the other hand, any tangible goods are not distributed evenly in the world, which means that not all countries can enjoy a fair play and regional conflicts might be stirred.

Even in the prime time of Gold Standard (1870-1914), it was faced with the deficiency of having tangible goods serve as the international standard currency, but this problem was somewhat alleviated because in practice, the gold standard was usually replaced by the key currencies of exemplary countries which strictly abide by the Gold Standard and these key currencies often possessed the characteristics of credit currency, free of limited supply of tangible goods. During the second half of 19th century, the international trade and investment system centering on British pound spread throughout the world. 90% of the international payment resorted to pound and “it was unquestionable that Pound was equal to gold.” (L. Yeager, 1976). Since Pound worked as the key currency, British exported capital by means of current account deficit which averaged 5% of its GDP, even hitting 7%-9% in some year. British government made the commitment that pound can be freely converted into gold. During the same period of time, other countries’ international foreign exchange reserve accumulated from trade surplus focused on gold and pound and witnessed a remarkable growth. For instance, the
international reserve of Russia and Belgium quadrupled and that of India and Sweden doubled. American international reserve also increased dramatically (B. Eichgreen, 1985). However, what was ironical was British pound was identified as the international standard currency simply because Britain exemplarily abided by the free convertibility of gold parity, but once Britain acquired its reputation and status in the international monetary system, it was induced to abuse it, which ultimately jeopardized the Gold Standard itself. In the later stage of the Gold Standard, the huge amount of offshore existence of pound had seriously threatened the Gold Standard.

The Great Depression in 1930s and the World War II declared the collapse of the Gold Standard, and the Bretton Woods Conference in 1944 established the Bretton Woods System, the new order of international monetary and financial system after war. The operational mechanism of the Bretton Woods System was quite different from the pre-war Gold Standard, i.e. the currencies of other countries pegged with US Dollar while the dollar pegged with gold. Every country’s authorities could go to US Department of Treasury and freely converted US dollar into gold. This new system reflected the practical situation of the international economic operations at that time. For example, the previous Gold Standard system turned out to be more and more problematic and US dollar was playing an increasingly important role in international financial and economic transaction. Therefore, the Bretton Woods system, to some extent, conformed to the trend of international economic development. However at the same time, this system also reflected the changing economic and political forces of different countries after the World War II, especially the changing status of America and Britain.

Under the Bretton Woods System, America needed adequate gold reserve to cope with other countries’ demand of converting gold. Just like what happened in Britain in the Gold Standard era, America suffered from hard constraints in issuing currency because of its promise of free gold convertibility. However, since private market participants were not allowed to convert gold in US Department of Treasury, the hard constraint that America was facing was dramatically weakened compared with Britain in the Gold Standard, too weak to avoid a huge amount of fiscal deficit and relaxed monetary policies in America. As a result, America issued excessive amounts of US dollar to export them to other countries, resulting in mounting pressure on US dollar depreciation. In 1971, President Nixon announced to de-peg US dollar from gold and other countries could no longer use US dollar to convert gold. In other word, the Bretton Woods System collapsed.

During the next few turbulent years, the international monetary system still basically centered on US dollar. Only Deutsche Mark (then Euro), Japanese Yen, British Pound and Swiss Franc floated against US dollar in real terms. Lots of developing countries and emerging market economies chose to have their domestic currencies to peg to dollar. After the Asian financial crisis, lots of East Asian countries went back to the previous dollar-pegging exchange rate system and US dollar even reinforced its status in the international monetary system. This was called “revived Bretton Woods System” (Dooley, et. Al., 2003).

During the past six decades after the Bretton Woods System was established in 1944, American has remained the “centre country” in the international monetary system and its current account changes at the mercy of certain regularity and cyclicity. To be specific, the whole process usually goes as follows: America exports US dollar (the international standard currency) by means of current account deficit—US dollar has to depreciate against other currencies when the current account deficit accumulated to a certain level—the current account gradually returns to balance after US dollar depreciation—America exports US dollar again by means of current...
account deficit.\textsuperscript{1} The difference only lies in the fact that the countries with current trade surplus might vary in different cycles. American has undergone three cyclical changes in this type ever since the establishment of the Bretton Woods System and every time the international economy was inflicted with imbalance to some extent or in some scope.

Cycle 1: American current account surplus kept decreasing during the mid and late 1960s. In 1971, it was the first time that the ratio of current account balance/GDP was lower than zero. America began to export US dollar by means of current account deficit instead of capital account deficit. At that time, the trade surplus mainly concentrated in Western countries. Since US dollar depreciated by a large margin\textsuperscript{2} in the 1970s when the Bretton Woods System collapsed, American current account deficit was alleviate. Its ratio of current account balance/GDP fluctuates around zero.

Cycle 2: American current account balance kept declining again in 1980s and its deficit was even as high as 3% or 4% of GDP. Japan and German turned out to be the countries with largest surplus in this cycle. US dollar depreciated against Japanese Yen and Deutsche Mark after the Plaza Agreement. At the beginning of 1990s, American current account restored its balance.

Cycle 3: Since the middle of 1990s, especially after the Asian financial crisis, the ratio of current account balance/GDP again declined in America. It registered -1.5% in 1995, -3.2% in 1999, -4.5% in 2002, -5.7% in 2004 and -6.5% in 2006. American current account deficit made up 75% of the global current account balance. However in this round of global economic imbalance which has not completed yet, Asian emerging countries, particularly China, become the major supplier of trade surplus. Current global economic scenario is identified as global economic imbalance simply because the countries involved feature huge amounts of trade surplus/deficit and the imbalance covers a wide range of regions.

II. The same logic underlines the repeated history: Triffin Dilemma

Current global economic imbalance is the modern version of an old problem. It just repeats the global economic imbalance of the periods of Gold Standard, British Pound as the international standard currency, and the Bretton Woods system, and their differences only lie in the degree of severity. All of these global economic imbalances share the same deep-rooted causes which are expected to last for quite a long time, i.e. the Triffin Dilemma of having sovereignty currency of a particular country as the international currency, and consequently the “asymmetric solution” used to address the n-1 problems of the international monetary system. Firstly, when a sovereignty country’s currency assumes the function of the international standard currency, it will be inevitably faced with the conflict between satisfying the demand of international payment and maintaining people’s confidence in the international currency. As a result, America, as the country whose currency was identified as the international standard currency after the Bretton Woods System, must keep exporting US dollar by means of current account deficit in order to satisfy the ever-increasing global demand for settlement and reserve. However if his current account deficit keeps accumulating, this will undoubtedly jeopardize people’s confidence in US dollar and undermine the economic foundation of US dollar as the international currency, putting the international monetary system in a dilemma. This is exactly what the Triffin Dilemma\textsuperscript{3} means.

\textsuperscript{1} At the early stage of the Bretton Woods System, America mainly exported US dollar by means of capital account deficit but then began to resort to current account to realize this goal at the later stage.
\textsuperscript{2} US dollar depreciated from $35 per ounce of gold to $280 per ounce of gold.
\textsuperscript{3} This Dilemma was put forward by American economist Triffin.
Secondly, as far as the coordination mechanism of international payment is concerned, any fixed exchange rate area composed of n countries where capital can flow freely will confront with the “n-1” problems. To be specific, since this exchange rate area only has n-1 independent exchange rates, there is one freedom left, i.e. there is one currency left to decide on its own internal and external value. The issue of disputing and utilizing the freedom is called “n-1 problem”. Generally people have three choices in solving this problem. The first is the “asymmetric solution” which means that in the fixed exchange rate area, a country alone is granted the right to utilize the freedom and promote its own monetary policies independently while the responsibility of maintaining n-1 fixed exchange rates was shouldered by the other n-1 countries. Under such circumstances, the special country which holds the freedom becomes the “centre country” while other countries are “peripheral countries” because they are not free to implement independent monetary policies. The monetary policies of peripheral countries are just used to passively maintain the fixed exchange rate and interest rate parity. The second solution is called “symmetric solution” which means n countries work together to utilize this freedom and shoulder the responsibilities of maintaining the n-1 fixed exchange rate. There are no distinctions between centre country and peripheral countries in this solution. The member countries can either resort to concerted actions to maintain the n-1 fixed exchange rate or establish one central bank and implement unified monetary policies to realize this goal. The third solution works for regional fixed exchange rate area instead of the global one. It introduces into the fixed exchange rate area the (n+1)th constrained variable, External Anchor. People succeed in pegging n exchange rates with each other by pegging them with the external anchor whose value is determined by factors outside of the system. Thus, the prices of n currencies within this system are decided in an endogenic way and compatible with each other. Whether to choose asymmetric solution or symmetric solution depends on the interaction of market forces. In addition, this is also closely related to the combat among international political and economic forces.

Both Bretton Woods System and post-Bretton Woods System center on US dollar and adopt asymmetric solution to solve the n-1 problem of the fixed exchange rate regime. America, as the economic super-power, assumes the status of “centre country” while major “peripheral countries” vary at different time. Western Europe and Japan were once the peripheral countries of the fixed exchange rate system and now East Asian countries, led by China, gradually take up this role. So long as US dollar maintains its central position, people will inevitable encounter the problem of American current account deficit and global surplus as well as the cycle mentioned above. What’s more, US dollar’s central position, to some extent, determines America’s position as the “centre country” in the asymmetric solution. Consequently, America plays the role of “central bank” to export currency to other countries and his monetary policies are enabled to dominate the international economy as well as shift the responsibilities of adjusting exchange rate and economic system to other countries. It is the inherent conflict of having the sovereignty currency work as the international standard currency that leads to the collapse of the Bretton Woods System. During the post-Woods System era, although this inherent conflict was alleviated by de-pegging between US dollar and gold as well as diversified international reserve, it is not removed fundamentally. Current global economic imbalance is just the repetition of an old logic: Triffin Dilemma.

III. Why this round of global imbalance: deeper, wider, and surplus concentrating in East Asia

Although sharing the same deep-rooted causes with previous imbalances, this round of global economic imbalance turns out to be deeper and wider and global surplus mainly concentrates in the East Asian countries. We believe that the causes of these new features are bound to give people a more penetrating insight into current global economic scenario.
Fundamentally speaking, the new feature of this round of economic imbalance is caused by changing parameters of global economy.

Firstly, people’s demand for international transactions and means of reserve increases even faster. The global economic integration began to speed up since the 1990s. Commodities, factors and personnel flow at an unprecedented speed and scale, which leads to even greater demand for international transaction and means of reserve. As a result, America has to increase the supply of US dollar, the major international standard currency, by a larger margin, which has to be achieved by accumulating more current account deficit.

Secondly, the external constraints of international currency supply have been dramatically relaxed. Under the Bretton Woods System, countries with trade surplus could convert US dollars into gold from America, forcing America to adopt tightened policies and restrain the further development of American current account deficit. The post-Bretton Woods System completely got rid of the constraints caused by gold conversion, so America could issue money freely to satisfy the requirement of its own economic development and guarantee its domestic economic balance by means of monetary policies and fiscal policies, while imposing the pressure of easing external imbalance on his trading partners who needed US dollars for international reserve. Greenspan, former Chairman of Fed, once said that Fed is not limited by anything in injecting US dollars to stimulate American economic development.4

Thirdly, opened capital account and international financial integration allow all the countries to allocate their savings in a wider scope and their domestic savings can deviate more from domestic investment. Today’s international economy displays lots of new features. For example, an increasing number of countries are opening their capital account. The international financial integration is accelerating its pace. The financial assets are growing even faster than the growth rate of GDP. The transaction volume caused by capital flow is much larger than that caused by current account. In addition, the highly integrated international financial market lifts the restriction over the balance between domestic savings and investment, which weakens the correlation between its saving rate and investment rate and consequently results in longer lag period before restoring the balance between saving and investment. If the international capital had not been allowed to flow more easily, it is hard to imagine that current global economic imbalance would have been so serious.

Fourthly, the international monetary system loses its rules and faces mounting conflicts. Because of the collapse of the Bretton Woods System, the world economy lost previously clearly defined government intervention rules as well as the bindings over countries’ responsibility of adjusting the international payment. Consequently, all countries have to adopt policies in the informal monetary arrangements without rules and bindings to cope with international economic issues. For the sake of their own interests, lots of countries would rather resort to other things but negotiation and cooperation to address the international economic imbalance, leading to graver and more enduring current account imbalance.

There are three major reasons contributing to the fact that the global surplus mainly concentrates in the East Asia in this round of global economic imbalance. Firstly, the peripheral countries share similar development strategies. After the World War II, Western European countries and Japan adopted the export-oriented development strategy successively to forge ahead their employment and economic growth. In order to push forward the export, the Western countries took such measures as curbing salary growth, dampening consumption and beefing

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4 See “Global Economic Imbalance and Its Impact on Asian Economy”, Li Changjiu, Xinhua Website, Aug 17, 2006.
up investment\(^5\) in 1950s and 1960s (Eichengreen, 1996), while Japan lowered exchange rate, pegged to US dollar and encouraged savings in 1960s and 1970s. Both Western Europe’s policy of curbing salary growth and Japan’s policy of lowering exchange rate achieved the same results\(^6\) pulling down the cost of export products and enhancing the competitiveness of export sectors, which ultimately realized the export-oriented strategy of driving up growth and employment with the help of export. As a result, the majority of the global surplus went to Western European countries in 1960s and to Japan in 1980s. Once the Western European countries and Japan joined the ranks of economic powers, they soon “graduated” from the bloc of “peripheral countries” in the (post-)Bretton Woods System, but then Asian countries followed them and chose the Western European and Japanese export-oriented development model, gradually growing into the peripheral countries.\(^7\) Secondly, East Asian countries are endowed with low-cost labor. During the past decade, the restructuring of global supply chain, the division of production procedures and global service outsourcing have sped up. East Asian countries, particularly China, has a huge amount of cheap labor, attracting labor-intensive production to move and transfer to East Asian, particularly China, and ultimately leading to large amounts of trade surplus. Thirdly, the Asian Financial Crisis of 1997 resulted in “excessive adjustment”. The Crisis made East Asian countries to realize that they could use their domestic currency neither to get loans from other countries nor to provide long-term loan to domestic enterprises or people.\(^8\) The only way was to resort to international loans to get adequately financed. Consequently, they were plagued by the double mismatch of currency and term and therefore were extremely likely to be hit by speculation, falling prey to the monetary crisis and banking crisis. When the Asian Financial Crisis was finally completed, the East Asian countries drew lessons from it and started to use their own foreign exchange reserve to support domestic currency and threaten the hot money. However, they ended up accumulating excessive foreign exchange reserve and changed from net borrowers into net lenders. Thanks to the width, depth and liquidity of American capital market as well as the unique feature of US dollar as the key currency, the excessive savings of the East Asia mainly flew to America.

IV. Conclusion and policy implications

If people stick to the thoughts of asking countries with trade surplus to shrink their surplus and countries with trade deficit to shrink their deficit to address current global economic imbalance, instead of solving the deep-rooted institutional cause of imbalanced international monetary system, they cannot succeed in resolving this problem once and for all. The policy measures of investment, saving, exchange rate and import/export might be helpful in addressing the imbalance for the time being, but will not succeed in avoiding similar or even more another round of serious global economic imbalance in which trade surplus countries might shift to other countries instead of China.

The key of resolving the global economic imbalance, to a large extent, is to improve the international monetary system and make it more diversified and balanced. This primarily needs a long process involving the choices of market and gradual changes. At the same time, this process must happen at the cost of weakening the status of US dollar and America as the center of the international monetary system, which undoubtedly will be fiercely against by America. In addition, it requires dialogues, coordination and cooperation among countries to establish a more diversified international monetary system and resort to “symmetric solution” to

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\(^5\) This is demonstrated mainly in the social compact implemented by many European countries in 1950s and 1960s.

\(^6\) Eichengreen (2004) believed that these two kinds of policies are just two sides of one coin in terms of their effect.

\(^7\) During the Bretton Woods System era and before 1980s, these Asian countries were either too small to play significant economic roles or isolated from the international market system.

\(^8\) This happened simply because their domestic capital markets, such as stock market and bonds market, have remained underdeveloped.
solve the n-1 problem, ultimately forming a comparatively reciprocal mechanism of sharing the responsibilities of adjusting international payment among countries. However, past experience shows that it has always been fragile and difficult to pursue common interest and carry out super-country activities in a world composed of sovereignty countries. Therefore, in this sense, we should admit that it will take a long time to overcome frictions and conflicts among countries and ultimately solve the global economic imbalance.

The following is the policy implications of this paper.

Firstly and also the most important, as the important participant involved in current global economic imbalance, China should understand exactly that the fundamental cause of the global economic imbalance is the imbalanced international monetary system, instead of some superficial factors as investment, saving, exchange rate and import/export. Merely focus on these superficial factors tend to put China into a passive position because they usually simplistically accuse China for creating this round of global economic imbalance. The comprehensive and correct understanding of the cause of global economic mess will help China to clarify its position in the international community and formulate appropriate strategies to develop further. In addition, so long as we understand that current imbalance, to some extent, is just the repetition of history at the mercy of similar regularities and is highly likely to happen again, China should promote the international community to make joint efforts in forging ahead the reforms of international monetary system and stress that China alone could not solve this problem fundamentally and completely.

Secondly, the export-oriented development strategy adopted during the past decades has practically put China into the rank of peripheral countries of the international system and given rise to the external economic imbalance in recent years. As a result, China should immediately embark on the work of adjusting current development strategy (Wu Jinglian, 2006) so as to “graduate” from the peripheral countries as soon as possible. To be specific, China should reinforce the policies of expanding consumption from different aspects, such as the minimum salary mechanism, consumption credit policies, and the policies that allow the production cost to fully reflect the cost of social regulation. China should also improve the investment and financing policies and intensify its efforts in establishing and bettering the multi-layered financial system with diversified ownership and financial products so that the domestic savings can be efficiently transformed into investment with a low cost, preventing underdeveloped financial system from curbing the investment and ultimately enhancing the efficiency and quality of investment. In addition, China should also put on her agenda the work of adjusting foreign trade policies and related package policies.

Thirdly, China should push ahead the regional monetary cooperation mechanism at the appropriate time and in an appropriate speed because this mechanism could, on the one hand, result in reciprocal and coordinated international payment to alleviate the regional economic imbalance and dampen the regional demand for international standard currency, and on the other hand, help to create ultimately the regional currency similar to the Euro to provide additional supply of international standard currency. A diversified and competitive international monetary currency will be more effective in restraining the excessive issuance of the international standard currency to solve the Triffin Dilemma and reducing the global economic imbalance. The emerging and strengthening of Euro has pushed the international monetary system to make a great stride towards diversification. China could also devote more efforts in forging ahead the monetary cooperation in the East Asia at the appropriate time and in an appropriate speed.
APPENDIX II

SPONSOR PROFILES
HOST SPONSORS
Headquartered in Beijing, China Construction Bank Corporation (the “Bank”) has 52 years’ history of operation in China. The Bank was listed on The Stock Exchange of Hong Kong Limited in October 2005 (Stock Code: 939), and became the first bank listed overseas among the big four Chinese commercial banks. As at the end of 2006, with a market capitalisation of USD142,994 million it ranked as one of the top 10 listed banks in the world. At the end of 2006, the Bank had a network of 13,629 branches and sub-branches in Mainland China, and maintained overseas branches in Hong Kong, Singapore, Frankfurt, Johannesburg, Tokyo and Seoul, as well as representative offices in London and New York, with a total of 297,506 employees. Its subsidiaries mainly include China Construction Bank (Asia) Corporation Limited (formerly Bank of America (Asia) Limited), China Construction Bank (Asia) Limited (formerly Jian Sing Bank Limited), Sino-German Bausparkasse Co. Ltd and CCB Principal Asset Management Co., Ltd.

In 2006 the Bank developed various businesses in alignment with its strategy in order to realise the transformation of its business structure, and promoted the reengineering of operation mechanism by improving management patterns and business processes. With improved business structure and progressing reforms, the Bank is well on the way towards its strategic goal of becoming a world class commercial bank with the best services to our customers, the most value to our shareholders and the best career development opportunities to our employees.
Bank of America is one of the world's largest financial institutions, serving individual consumers, small and middle market businesses and large corporations with a full range of banking, investing, asset management and other financial and risk-management products and services. The company provides unmatched convenience in the United States, serving more than 59 million consumer and small business relationships with more than 6,100 retail banking offices, nearly 18,500 ATMs and award-winning online banking with nearly 25 million active users. Bank of America is the No. 1 overall Small Business Administration (SBA) lender in the United States and the No. 1 SBA lender to minority-owned small businesses. The company serves clients in more than 150 countries and has relationships with 99 percent of the U.S. Fortune 500 companies and 83 percent of the Fortune Global 500. Bank of America Corporation stock (NYSE: BAC) is a component of the Dow Jones Industrial Average and is listed on the New York Stock Exchange.
China International Capital Corporation Limited (“CICC”) was founded as a strategic partnership of prestigious domestic and international financial institutions in China. CICC is headquartered in Beijing with subsidiary in Hong Kong, branch in Shanghai and retail brokerage offices in Beijing, Shanghai and Shenzhen. We are committed to delivering comprehensive capital market solutions and adding value to clients.

With a unique combination of expertise in both domestic and global capital markets, extensive industry know-how, in-depth understanding of China and its business environment, as well as an international support network, CICC is committed to establishing long-term relationship with clients by offering world-class and innovative financial services and assisting them to realize strategic objectives. Since its incorporation in 1995, CICC has established its market leading position in such key strategic sectors as telecommunications, power, oil and gas, petrochemical, non-ferrous metal, banking and insurance in terms of adversary business. CICC is now natural choice of major industry players in China. Being milestones for CICC and even China’s investment banking industry, many of these successful deals have won CICC numerous domestic and international awards from key media resources, making CICC an industry leader.

CICC’s outstanding underwriting achievements have made it an unparalleled arranger of global offerings for China’s state-owned enterprises (“SOEs”). Since 1997 when Chinese SOEs began their international capital markets journey, CICC has been ranked number one in terms of value financed through Asian (ex-Japan) IPOs, overseas IPOs by Chinese companies and accumulated overseas financings by Chinese companies.

CICC has strong expertise in domestic and overseas equity underwriting, securities brokerage, asset management and market research. We are known for our “strong research capability, professional sales and trading and prudent risk control mechanism” in serving fund management companies, insurers, QFII and conglomerates. In 2004, CICC was announced as a pilot securities firm in terms of innovation and awarded in 2007 as an AA securities firm in the category A in accordance with guidelines for regulations of classification of securities firms. In 2007, CICC initiated new business activities including retail breakage, principal investment and QDII.

CICC has talents from both domestic and international markets, and has developed a professional team with high standard professionalism, innovation, outstanding execution capability and experiences.
The 18-year history of Shanghai Stock Exchange is just one of the many stories of China’s reform and opening-up efforts and transition to a market economy. It is a story of building from nothing, a story of market creation and expansion, a story of technology innovation, a story of tireless pursuit of quality service, effective regulation and risk control, and a story of success. Indispensable to this growth story is a political commitment among top national leadership and guidance extended by China Securities Regulatory Commission. China’s securities market is now an emerging marketplace with the greatest potential in the Asia-Pacific Rim and contributes greatly to China’s steady economic performance and reform achievements.

The ongoing reform and opening-up processes as well as the rapid economic growth present unprecedented opportunities for China’s capital market. To propel the market development to a higher level, we at the Shanghai Stock Exchange seek to establish the comparative advantages of technology, service, innovation and talents. We will continue to assume a key responsibility in enhancing investor confidence, improving regulation, ensuring stability as well as strengthening market discipline. To be more specific, the regulatory function of the stock exchange must be strengthened in the first place. For internal operation, the focus will be on human resource development and organizational efficiency improvement via innovative reforms so that the SSE will become better positioned in a competing environment. In so doing, we believe that a new chapter will be opened in the history of the Exchange as it works to become a first class stock exchange in the world, a stock exchange committed to safety, transparency, efficiency, openness and innovation.
Shanghai International Group was established on April 20, 2000 with the registered capital of 10.56 billion RMB.

The Group’s business scope includes holding investment, capital management and state-owned assets management. Authorized by Shanghai Municipal Government, the Group focuses on financial investment, capital management, asset management, financial research, and social-economic consulting services, complemented by non-financial business.

Shanghai International Group aims at establishing its own brand and developing into a comprehensive financial holding group covering a variety of fields such as trust and funds with financing as its core business, thus making significant contribution to the social and economic development of Shanghai as well Shanghai’s target of building itself into an international financial center.

Shanghai International Group was established on the basis of Shanghai International Trust Co., Ltd. which had over 20 years of experiences in financial operation and management of major investment projects. The Group has issued company bonds in overseas capital market for 5 times and raised more than 4 billion USD to support Shanghai’s social and economic development. It repays all the foreign debt in due course and thus has a sound reputation in the international capital market.

Shanghai International Group is the largest shareholder of Shanghai Pudong Development Banking Co., Ltd., Shanghai Rural Commercial Bank and Guotai Junan Securities, and hold shares of major financial enterprises such as Shanghai International Trust and Shanghai Securities. Over the past eight years, the Group has provided outstanding services of investment, financing and consultancy for major construction projects such as Nanpu Bridge, East Yan’an Road tunnel, Hongqiao Airport expansion, rail transit and transrapid maglev line, expressway network and Yangshan deep-water port.
LEAD SPONSORS
Ceyuan Ventures is a Beijing-based early stage venture capital firm focused on IT and emerging growth companies. We emphasize on backing great teams, technology and business innovation. Our mission is to assist entrepreneurs in creating and building world-class businesses. Our conviction, network of relationships and grass roots culture give us the opportunity to discover the next big idea early.
Deloitte is the brand under which tens of thousands of dedicated professionals in independent firms throughout the world collaborate to provide audit, consulting, financial advisory, risk management, and tax services to selected clients. These firms are members of Deloitte Touche Tohmatsu, a Swiss Verein (DTT). Each member firm provides services in a particular geographic area and is subject to the laws and professional regulations of the particular country or countries in which it operates. DTT helps coordinate the activities of the member firms but does not itself provide services to clients. DTT and the member firms are separate and distinct legal entities, which cannot obligate the other entities. DTT and each DTT member firm are only liable for their own acts or omissions, and not those of each other. Each of the member firms operates under the names “Deloitte,” “Deloitte & Touche,” “Deloitte Touche Tohmatsu,” or other related names. Each DTT member firm is structured differently in accordance with national laws, regulations, customary practice, and other factors, and may secure the provision of professional services in their territories through subsidiaries, affiliates and/or other entities. Deloitte's China practice provides services through a number of legal entities and those entities are members of Deloitte Touche Tohmatsu (Swiss Verein).

We are one of the leading professional services providers in the Chinese Mainland, Hong Kong SAR and Macau SAR, with 7,000 people in ten offices including Beijing, Dalian, Guangzhou, Hong Kong, Macau, Nanjing, Shanghai, Shenzhen, Suzhou and Tianjin.

As early as 1917, we opened an office in Shanghai. Backed by our global network, we deliver a full range of audit, tax, consulting and financial advisory services to national, multinational and growth enterprise clients in China.

We have considerable experience in China and have been a significant contributor to the development of China's accounting standards, taxation system and local professional accountants. We also provide services to around one-third of all companies listed on the Stock Exchange of Hong Kong.
SPONSORS
As a joint-stock commercial bank set up on Dec. 29, 1995, the Bank of Shanghai (hereinafter “the Bank”) features a two-level operating structure within one legal entity, with the paid-up capital booked at RMB 2.6 billion, comprising government-owned shares and shares held by corporations and by numerous individuals.

By taking advantage of its unique features as a local joint-stock commercial bank, the Bank has reaped great economic and social benefits from its prudent management and operational excellence.

In the Banker’s top 1000 ranking in July 2004, the Bank was No. 344 among the 500 largest banks around the globe.

In Sep. 1999 and Dec. 2001, the Bank received equity investments from International Finance Corporation (a member of the World Bank Group), Hong Kong and Shanghai Banking Corporation, and Hong Kong-based Shanghai Commercial Bank, representing a significant step closer towards a modern commercial bank aligned with international standards.
Bingham McCutchen Murase is an international law firm with approximately 1,000 lawyers in 13 offices, including Hong Kong, London and Tokyo, focused on serving clients in complex financing and financial regulatory issues, high-stakes litigation, government affairs, and a wide variety of sophisticated corporate and technology matters. In the more than 100 years since our firm’s establishment, we have developed extensive experience in U.S., European and Asian cross-border matters and have advised clients on the strategic legal, business and governmental issues necessary for success in global business operations.

Attorneys in our worldwide offices represent major U.S., European and Asian companies throughout Asia. We provide clients with the strategic insight crucial for navigating the unique cultural framework of the region. Our firm offers teams of professionals with broad experience in cross-border matters, including M&A, project finance, financial transactions, joint ventures, complex litigation, intellectual property, governmental relations and regulatory issues as well as major cross-border insolvencies and corporate restructurings.
BlackRock is a premier provider of global investment management, risk management, and advisory services. As of 30 June 2008, the firm manages US$1.43 trillion across equity, fixed income, real estate, liquidity, and alternative strategies. Clients include corporate, public, and union pension plans, insurance companies, mutual funds, endowments, foundations, charities, corporations, official institutions, and individuals worldwide.

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For additional information, please visit the Company's website at www.blackrock.com.
CME Group is the world’s largest and most diverse derivatives exchange. Formed by the 2007 merger of the Chicago Mercantile Exchange (CME) and the Chicago Board of Trade (CBOT), CME Group serves the risk management needs of customers around the globe. As an international marketplace, CME Group brings buyers and sellers together on the CME Globex electronic trading platform and on its trading floors. CME Group offers the widest range of benchmark products available across all major asset classes, including futures and options based on interest rates, equity indexes, foreign exchange, agricultural commodities, and alternative investment products such as weather and real estate. CME Clearing matches and settles all trades and guarantees the creditworthiness of every transaction that takes place in its markets. CME Group is listed on NASDAQ under the symbol “CME.”
China International Fund Management Co., Ltd.

Incorporated in May 2004, China International Fund Management Co., Ltd. is the joint venture between J.P. Morgan Fleming Asset Management (UK) Limited ("JPMorgan Fleming") and Shanghai International Trust and Investment Co., Ltd. ("SITICO").

It has a registered capital of RMB150 million (or approximately US$18.2 million) with JPMorgan Fleming and SITICO currently holding 49% and 51% stakes respectively.

With the support of both shareholders and their vast experience in the fund industry, both locally and overseas, China International Fund Management Co., Ltd. will follow the management principles of professional integrity, a customer-focused approach, quality fund performance and long-term localization. The company's objective is to provide investors with advanced asset management philosophy and global investment services which will, in turn, help to grow China's burgeoning fund industry. It is the company's intension to strive to become the "global investment specialist for local investors and the China investment specialist for global investors."
China Pacific Insurance (Group) Co., Ltd. is a leading composite insurance group in the PRC, providing, through our subsidiaries and affiliates, a broad range of life and property and casualty insurance products and services to individual and institutional customers throughout the country. We also manage and deploy our insurance funds through our subsidiary, CPIC Asset Management.

CPIC had gross written premiums of RMB 74,236 million in 2007, of which RMB 50,686 million was from the operations of life insurance business, ranking third in the PRC life insurance market with a market share of 10.2%, and RMB 23,474 million was from the operations of P&C business, ranking second in the PRC property and casualty insurance market with a market share of 11.2%. CPIC ranked third in terms of assets under management in the PRC insurance industry as of 31 December 2007, accounting for 9.9% of all insurance assets in the PRC insurance industry.

Embracing the commitment to business integrity and underpinned by growth of over a decade, CPIC has become one of the most recognized composite insurance providers in the PRC with a stable and leading market position and a strong competitive advantage and has created value for the shareholders through profitable growth. CPIC’s principal strengths include:

- One of the most recognized insurance brand names distinguished by a core commitment to business integrity.
- Consistently leading market position and extensive customer base.
- Continued improvement in business mix and balanced and measured growth in business volume.
- Nationwide distribution network and comprehensive service platform.
- Professional and prudent insurance asset management.
- Advanced and reliable information technology system.
- Experienced management with both domestic and international expertise.

Our strategic objective is to become a leading, internationally-competitive financial services group focusing primarily on insurance businesses. We seek to capture the opportunities offered by the rapid development of the PRC insurance industry by actively developing our core insurance businesses, within a group management framework, and achieving a rapid yet balanced growth, in terms of both volume and value, in our core life insurance, property and casualty insurance and asset management businesses. In the meantime, we plan to develop, as appropriate, other financial services businesses that are complementary to our core businesses. By so doing, we aim to build up a leading financial services group with superior reputation, premier brand name, stable financial position and strong profitability.
As a globalized and dynamic fund management company, China Universal Asset Management is jointly established by three leading companies: Orient Securities, Wenhui-Xinmin United Press Group and China Eastern Airlines, all of which enjoy prestige in their own fields. Certified by China Securities Regulatory Commission as the “innovation model”, Orient Securities is one of the best securities dealers in China with high quality assets and optimum profitability. Wenhui-Xinmin United Press is one of the biggest press groups in China, possessing tremendous media coverage and influence. China Eastern stands among top three domestic air companies, enjoying huge brand influence with a large customer base.

Attracting both Chinese and foreign talents by advanced corporate culture, China Universal Asset succeeds in providing popular products through efficient distribution channel as well as serving our clients with first-class risk management and outstanding investment performance. China Universal Asset is determined to grow into the professional authority in such fields as international assets management and international market investment, and rank among top asset management companies in China.

China Universal Asset Management is headquartered in the Financial Trade Zone of Lujiazui Area, Shanghai.
For nearly 160 years, Davis Polk has advised industry-leading companies and global financial institutions on their most challenging legal and business matters. The firm ranks among the world’s preeminent law firms across the entire range of its practice. Based in New York City, Davis Polk has approximately 700 lawyers in ten offices, including Hong Kong and Beijing.

Active in Asia for nearly a century, Davis Polk has a long history as a leading firm on global transactions involving China. The firm was lead counsel for the Industrial and Commercial Bank of China on its $21.6 billion dual-listed initial public offering. Other matters include the IPOs of Air China, China Merchants Bank, China Construction Bank, Sinopec, China Unicom and Baidu.com, sovereign debt offerings by the People's Republic of China, the formation of China International Capital Corporation, and numerous other equity and high-yield debt offerings, mergers and acquisitions and private equity transactions.
Fidelity International Limited (FIL) was established nearly 40 years ago and operates in markets outside the Americas. The company and its subsidiaries currently manage more than $250b for major institutions and individual investors globally. Our US affiliate, Fidelity Management and Research (FMR), was founded in Boston in 1946 and is one of America’s largest mutual fund companies. Fidelity opened its first overseas office in Tokyo in 1969 and operates throughout the world. In Asia Pacific, Fidelity has offices in Japan, Hong Kong, Taiwan, Australia, Korea, India (Delhi & Mumbai), Singapore, and China. Over 70 research professionals and fund managers based in these offices identify investment opportunities in this diverse and rapidly growing market. With access to over 600 total Fidelity investment professionals globally, FIL and FMR together covers 95% of the world’s stockmarkets by capitalization, giving us a view of the world markets that few other investment managers are able to match.
Established in 1999, Fullgoal Fund Management Co., Ltd. is one of the first ten Chinese fund management companies approved by China Securities Regulatory Commission. In 2003, Bank of Montreal (BMO), Canada’s earliest bank, became the shareholder of Fullgoal Fund Management, transforming Fullgoal into the first foreign-shared company among the earliest public fund management companies in China. In August 2005, Fullgoal was among the first 15 companies certified by the Ministry of Labor and Social Security for “enterprise annuity fund investment management”. In January 2008, Fullgoal was officially qualified for QDII, making a great stride towards her target of emerging into a more globalized and diversified fund management company.

Currently, there are altogether 12 mutual funds under the management of Fullgoal, including 3 Han-series closed-end funds (Hansheng, Hanxing and Handing) and 9 Tian-series open-end funds (Tianyuan, Tianli, Tianyi, Tianrui, Tianhui, Tianbo, Tianshi, Tianhe and Tiancheng), covering nearly the full spectrum of investment portfolio of mutual funds with various risk preference to satisfy the risk-return demands for different clients. By the end of Mar. 31, 2008, the net value of Fullgoal’s mutual funds amounts to 62.555 billion RMB.
JPMorgan has a long history in China dating back to 1920s when the bank opened branches in Shanghai and Tianjin providing financial services to both local and foreign companies and government entities. JPMorgan confirmed its continued commitment to China becoming Bank of China's first American correspondent bank in 1973 and establishing a representative office in Beijing in 1981. Today, JPMorgan is one of the few fully integrated foreign banks in China with leadership positions across investment banking, risk management, foreign exchange, bond underwriting, cash management, trade finance and private equity. The bank's service platform and capabilities are further enhanced by its strategic alliance with Shanghai International Trust & Investment Co. and Zhongshan Futures. In August 2007, JPMorgan locally incorporated its commercial bank branches in Beijing becoming JPMorgan Chase Bank (China) Company Limited. This marked a milestone in the firm's history in China.
Established in 1976, KKR is a leading global alternative asset manager. The core of the Firm’s franchise is sponsoring and managing funds that make private equity investments in North America, Europe, and Asia. Throughout its history, KKR has brought a long-term investment approach to portfolio companies, focusing on working in partnership with management teams and investing for future competitiveness and growth. Additional funds that KKR sponsors include KKR Private Equity Investors, L.P. (NYSE Euronext Amsterdam: KPE), a permanent capital fund that invests in KKR-identified investments; and two credit strategy funds, KKR Financial (NYSE: KFN) and the KKR Strategic Capital Funds, which make investments in debt transactions. KKR has offices in New York, Menlo Park, San Francisco, London, Paris, Hong Kong, Beijing, Sydney and Tokyo.
Medley Capital LLC ("MC") is a private investment management firm with offices in New York, San Francisco, and Hong Kong. MC invests capital in public and private securities globally through a variety of investment funds. MC has 32 investment professionals who bring a diverse knowledge base including a wide range of finance, global industry expertise and senior domestic and international government experience.
Morgan Stanley
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Morgan Stanley is a global financial services firm listed on the New York Stock Exchange (NYSE: MS) and a market leader in securities, investment management and credit services. With more than 600 offices in 31 countries, Morgan Stanley connects people, ideas and capital to help clients achieve their financial aspirations.

Morgan Stanley has had a presence in Asia for more than 35 years. With over 4,000 employees based in regional hubs Hong Kong and Tokyo, and offices in Beijing, Shanghai, Taipei, Seoul, Singapore, Bangkok, Mumbai, Sydney and Melbourne, the Firm provides its clients with access to the full scope of Morgan Stanley products and services.

Morgan Stanley works with many of Asia's governments and plays a major role in re-structuring and privatizing state-owned enterprises. The Firm also advises Asia's leading corporations on complex domestic and cross-border mergers & acquisitions, and equity, equity-linked or debt capital raising on local and international capital markets.

In addition to its own presence in Asia, the Firm is a major shareholder in China's leading domestic investment bank, China International Capital Corporation (CICC), a joint venture between Chinese and international partners.

For more information about Morgan Stanley, please visit www.morganstanley.com (English) and www.morganstanleychina.com (Chinese).
New Enterprise Associates, Inc. (NEA) is a leading venture capital firm focused on helping entrepreneurs create and build major new enterprises that use technology to improve the way we live, work and play. Through its affiliated funds, NEA focuses on investments at all stages of a company’s development, from seed stage through IPO. With approximately $8.5 billion in committed capital, NEA’s experienced management team has invested in over 600 companies, of which more than 160 have gone public and more than 240 have been acquired. NEA has U.S. offices in Chevy Chase, Maryland; Menlo Park, California; and Baltimore, Maryland. In addition, New Enterprise Associates (India) Pvt. Ltd. has an office in Bangalore, India and New Enterprise Associates (Beijing), Ltd. has offices in Beijing and Shanghai, China. For additional information, visit www.nea.com.
Prudential plc (United Kingdom) is an international retail financial services group with significant operations in Asia, the US and the UK. Founded in London in 1848, we have grown to become a leading provider of insurance and financial services worldwide, with more than 21 million customers and US$510 billion in assets under management (as of 30 June 2008).

In Asia, Prudential is the leading Europe-based life insurer in terms of market coverage and number of top three market rankings. With around 450,000 employees and agents across the region, we have life insurance and asset management operations in 13 markets covering Mainland China, Hong Kong, India, Indonesia, Japan, Korea, Malaysia, the Philippines, Singapore, Taiwan, Thailand, Vietnam and the United Arab Emirates.

Prudential’s fund management business in Asia is also one of the region’s largest, managing US$68 billion in assets and holding more top five market rankings than any other regional player (as of 30 June 2008).

Prudential plc of the United Kingdom is not affiliated in any manner with Prudential Financial, Inc., a company whose principal place of business is in the United States of America.
With over 1,600 lawyers and offices in New York, Washington, Pittsburgh, Philadelphia, Chicago, Los Angeles, San Francisco, Beijing, Hong Kong, London, Paris, Geneva, Munich, Abu Dhabi, Dubai and many other cities, Reed Smith Richards Butler is ranked one of the 15 largest law firms in the world. The firm represents many of the world’s leading companies in cross-border and other strategic transactions, complex litigation and other high-stakes disputes, and crucial regulatory matters.

The lawyers at Reed Smith counsel 28 of the top 30 U.S. banks and 10 of the world’s 12 largest pharmaceutical companies. Based on the results of a survey of large and Fortune 1000 in-house counsel, the BTI Consulting Group ranked Reed Smith among the top 5 firms for client service. The Lawyer named Reed Smith its runner-up for U.S. Law Firm of the Year, and The American Lawyer named the firm a finalist for its Litigation Department of the Year in the product liability category. The Deal highlighted the firm’s commercial restructuring and bankruptcy practice as the fourth most active.
Shenyin & Wanguo Securities Co., Ltd. (SYWG) is the first incorporated securities company in China by a merger of the former Shanghai Shenyin Securities Company and Shanghai International Securities Company. It is also one of the largest comprehensive securities companies in China and operates a full range of services in an extensive business network.

Most of its existing 217 shareholders including the Central Huijin Investment Co., the largest shareholder, are well-known large and medium-sized enterprises in China. It has developed into a large corporation with almost 2,800 personnel and a registered capital of RMB6,715,760,000 since its launch nearly 20 years ago. It sets up Shenyin & Wanguo (Hong Kong) Group Co. and a listed subsidiary Shenyin Wanguo (Hong Kong) Ltd. (0218) in the Hong Kong Special Administrative Region. SYWG and France-based BNP Paribas Asset Management SAS jointly founded the SYWG BNP Paribas Asset Management Co., Ltd. It also holds shares in Fullgoal Fund Management Co., Ltd.
A joint-stock commercial bank founded on August 28, 1992, Shanghai Pudong Development Bank (known as SPDBank for short) went listed in Shanghai Stock Exchange in 1999 (stock code: 600000). At present, SPDBank’s registered capital stands at RMB 5.66 billion yuan. SPDBank has earned respect and good fame in the domestic stock market on account of its outstanding performance and trustworthiness.

Over the past decade, SPDBank has adhered to the motto of “sticking to integrity and striving for excellence” and continuously developed its various banking businesses and enhanced its overall competence. By the end of 2007, its total assets stood at RMB 912.8 billion yuan, outstanding balance of loans being RMB 551 billion yuan and outstanding balance of deposits being RMB 762.1 billion yuan, making an after-tax profit of RMB 5.5 billion yuan. A nationwide network was laid out with over 30 branches and direct sub-branches and 408 outlets in 49 cities plus a representative office in Hong Kong.

In July 2008 SPDBank was ranked No.176 in terms of Tier 1 capital by the British Banker magazine among top 1000 banks around the world. In September, SPDBank was ranked the 2nd among the 3 Strongest Local Banks by Asianbanker. In November, the bank was awarded Best Discretion in Business in the rating of ‘The 10 Most Competitive Commercial Banks in Asia’. In October, the bank won the award of Best CSR Practice issued by American Chamber of Commerce in Shanghai. In December, the bank received the honor of ‘The Most Socially Responsible Corporation’ at the 3rd China CSR International Forum.

Now, being 15 years old, SPDBank has set out from a new start on a new journey. Guided by the new banner of ‘Innovative Thinking and Thoughtful Service’, the bank endeavors to grow into a modernized financial service provider with distinct core competence.
Tudor Investment Corporation (都德投资公司) is recognized as a leading global alternative investment management company. Founded in 1980 by Paul Tudor Jones, II, Tudor has a well established record as a profitable and prudent investment manager and has evolved into a diverse, multi-strategy enterprise. Tudor has over 50 portfolio managers engaged in a broad array of investment strategies in the global currency, equity, commodity, fixed-income, and private equity markets and over 400 employees supporting the firm’s trading, research, information technology, operations and administrative demands. Tudor currently manages approximately $17.5 billion in both client and proprietary assets. The firm is headquartered in Greenwich, Connecticut, has offices in Boston, New York, Washington D.C., Surrey (United Kingdom), London, Singapore, and Sydney, and plans to open a China office in Beijing in 2008. From the mid 1990s, Tudor has directly and indirectly made foreign private investments in nearly 40 Chinese enterprises and has maintained working contacts with various Chinese government agencies and institutions through its Washington D.C. Office.
Unio Holdings is New York City based owner-oriented investment and operating company. It believes in the principle that companies will be more effective when they combine the know-how and execution of the businessperson with the perspective and long-term vision of the business-minded investor. Unio’s principal business is acquiring operating companies that must be closely connected to their customers and compatible with Unio’s credo and culture. Based on the same investment approach it uses for acquiring operating companies, Unio’s second, complementary business is investing in publicly traded securities as a minority shareholder. Unio’s organizational purpose is to build an “enterprise of autonomous enterprises” whose productive power is enhanced by their exposure to Unio’s credo, culture & investment and management practices. Its financial purpose is to produce for Unio’s shareholder-owners enduring cash flows, an acceptable return on capital, and rising enterprise value.