

## The Impacts of Global Financial Crisis on Chinese Foreign Exchange Reserves and China's Responses\*

**Abstract:** As the result of continuous twin surplus, China has accumulated a huge foreign exchange reserve. The over 2 trillion reserve not only reflects serious resource misallocation, but also brings new costs and risks. After the burst of global financial crisis, the US government's rescue package introduced two types of risks to the safety of Chinese foreign exchange reserve: the potential decline of market value of US treasury bonds, and the potential US dollar depreciation. To mitigate the potential risks, Chinese government has adopted prompt and systematic policy measures, including criticizing US policies directly, speeding up diversification of reserve assets, encouraging SOEs to invest on overseas market, promoting RMB internationalization and proposing establishing a super-sovereign global reserve currency. However, these measures are not enough, and the necessary structural adjustments should be implemented.

**Key Words:** global financial crisis, China, foreign exchange reserve, diversification, structural adjustment

---

\* This paper is prepared for the International Conference on **Managing Economic Crisis in East Asia** jointly organized by Saw Center for Financial Studies and NUS Business School & East Asian Institute, November 6 2009, National University of Singapore. And it has been published in *Managing Economic Crisis in East Asia*, edited by Saw Swee-Hock and John Wong, ISEAS Publishing, Singapore, 2010.

## Introduction

In many respects, the world has been driven by major crises. The current global financial crisis, which was triggered by US subprime mortgage crisis, is doomed to bring dramatic changes to world economic structure and international financial architecture. As a rising developing economy, China certainly could not escape from the crisis. The export-led development strategy is facing serious challenge after the burst of crisis. The shrinkage of external demand causes the weak performance of Chinese's export growth, which hampers economic growth and labor employment. Due to income distribution inequality among sectors and inside households, alongside with the underdevelopment of social public goods such as education, medical care and social safety net, the household consumption is constrained at a very low level. Although Chinese government could ensure short-term economic growth by stimulating fixed asset investment, the fast-growing investment will turn into much more serious excess capacity in the next 3 to 5 years (not only in manufacture sector but also in infrastructure area), without the paralleled growth of internal and external final demands. The enlarging excess capacity will result in the decline of profitability of Chinese corporations, the surge of non-performing loans on the balance sheet of Chinese commercial banks, and a deflation pressure consequently. If Chinese government does not make necessary structural readjustments to its old growth model in time, the sustainable economic growth could not be achieved.

This paper will not focus on the real economy side, but on the financial side of the story. Due to the export-led and FDI-led development strategy, China has accumulated a huge foreign exchange reserve. This is not only a valuable national asset, but also a reflection of tremendous resource misallocation, i.e. the twin surplus. A large proportion of Chinese foreign exchange reserve is invested on US Dollar denominated assets, especially US treasury bonds. After the break out of US subprime crisis, the policy responses of US government to stabilize financial market and stimulate macro economy have led to the deterioration of US fiscal deficit and the ballooning of Fed's balance sheet. It seems that the decline of market value of US treasury bonds and the significant depreciation of US Dollar are unavoidable in the mid term. If these risks come true, the international purchasing power of Chinese foreign exchange reserves will suffer a lot. To mitigate the impact of global financial crisis to the safety of Chinese foreign exchange reserves, Chinese government has taken various measures such as requiring US government to behave more

responsibly, speeding up the diversification of reserve investment, encouraging state-owned enterprises to do more overseas investment, etc. However, the potential risk of foreign exchange reserve devaluation could not be eradicated, which is indeed a real cost for China's old growth paradigm. In the long-term view, the only effective way to ensure the safety of Chinese foreign exchange reserve is to decrease the flow and to further diversify the stock. To mitigate the accumulation of foreign exchange reserve, Chinese government should make structural adjustment as soon as possible, i.e. to change export-led growth strategy into domestic consumption driven economic strategy.

This paper is structured as following: the first part discusses the accumulation and investment of Chinese foreign exchange reserve; the second part summarizes the US government's policy responses to subprime crisis and analyzes the potential risks which Chinese foreign exchange reserves face; the third part introduces the reactions adopted by Chinese government to mitigate the risks; and the fourth part concludes.

## **I. The Accumulation of Chinese Foreign Exchange Reserve**

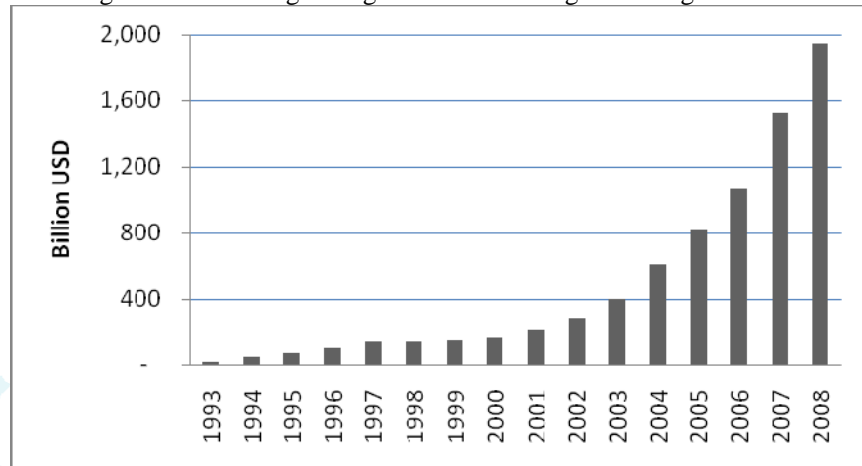
After entering 21th century, Chinese foreign exchange reserve has been facing rapid growing (Figure 1). Chinese foreign exchange reserve is only USD 165.6 billion in the end of 2000. The scale rose to USD 1.95 trillion in the end of 2008, over tenfold compared to that of 2000. China has already surpassed Japan to become the largest foreign exchange reserve holder around the world. Because Chinese government has not fully opened its capital account, the foreign exchange reserve is indeed the major way for Chinese investors to hold overseas assets. For example, in the end of 2007, the total international assets hold by Chinese is 2.29 trillion USD, of which Chinese foreign exchange reserve reached 1.53 trillion USD, nearly 67% of total overseas assets.<sup>1</sup> The foreign exchange reserve to GDP ratio reached 44% in 2008.<sup>2</sup>

---

<sup>1</sup> The data is quoted from Chinese international investment position statistics released by State Administration of Foreign Exchange, China.

<sup>2</sup> The 2008 GDP of China reached 30.06 trillion RMB (Chinese Bureau of Statistics). The year-end exchange rate of USD against RMB is 6.829 (Bank of China). The calculation was made by the author.

Figure 1: The Fast-growing of Chinese Foreign Exchange Reserve



Source: State Administration of Foreign Exchange, China.

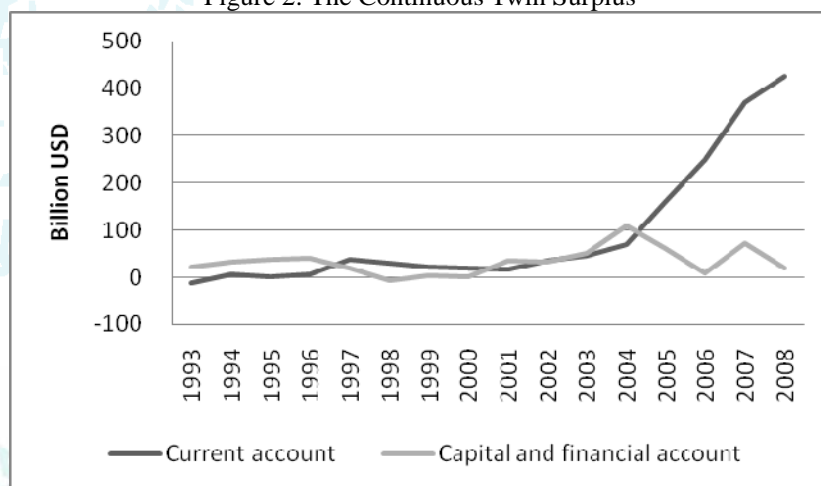
Chinese government has not disclosed either currency composition or asset composition of foreign exchange reserve. We could only make some rough estimation based on some related data sources. According to the Currency Composition of Official Foreign Exchange Reserves (COFER) released by IMF, as for the emerging and developing economies in the end of 2008, the currency composition of official foreign exchange reserve is as following: USD denominated assets 60%, Euro assets 31%, GBP assets 5%, JPY assets 2%, and other currencies denominated assets 2%. It is a pity that Chinese government does not report its currency composition to IMF. However, we could assume that the currency composition of Chinese foreign exchange reserve is similar to that of other emerging and developing countries. In other word, among the 1.95 trillion USD foreign exchange reserve of China in the end of 2008, about 1.17 trillion USD were invested in US dollar denominated assets.

As the most important destination of Chinese overseas portfolio investment, US government releases the data of foreign investments on US securities frequently. According to US treasury's Transactions of International Capital (TIC) statistics, as the end of June 30, 2008, the investment portfolio of Chinese investor (including both official and private investors) is as following: US treasury bonds 535 billion USD (44% of total portfolio), US agency bonds 544 billion USD (45%), US corporate bonds 27 billion USD (2%) and US stocks 100 billion USD (8%). Because the foreign exchange reserve is the major way for Chinese investors to hold overseas investment, and because most of Chinese official assets are invested in US dollar denominated assets, we could use the above data to estimate the

asset composition of Chinese foreign exchange reserve. The data demonstrates that the majority of Chinese foreign exchange reserve is invested on treasury bonds and agency bonds of developed countries, especially United States.

The major force behind the fast accumulation of Chinese foreign exchange reserve is the continuous twin surplus since 1999 (Figure 2). China has been running a current account surplus since the year of 1994, and trade surplus is the main source of current account surplus. From 1993 to 2008, China ran a capital and financial account surplus except 1998, the summit of East Asian financial crisis, and inward FDI is the major and relatively stable driver of capital and financial account surplus.

Figure 2: The Continuous Twin Surplus



Source: State Administration of Foreign Exchange, China.

Continuous twin surplus is an abnormal phenomenon and a component of global imbalance. Theoretically, for a developing country which lacks capital and hence has more profitable investment opportunities, the ideal combination is current account deficit plus capital account surplus. The developing country should use the capital lent from developed countries to buy machineries, technologies and manufactures from abroad for domestic investment or consumption, i.e., to translate capital account surplus into current account deficit (Williamson, 1995). China has a continuous current account surplus, which means China's domestic savings is larger than domestic investment. But at the same time, China still has significant FDI inflows. Therefore, the twin surplus of China reflects dramatic resource misallocations: on the one hand, it seems that China could not translate its

domestic savings into domestic investments; on the other hand, it seems that China could not translate its FDI inflow into current account deficit. The deep reasons behind the resource misallocation could be attributed to the underdevelopment of domestic financial market, and the distorted policy incentives.

The classical explanations for Chinese persistent current account surplus include saving-investment gap, domestic and global economic cycles, and global division of labor or global production network (Yu, 2006). Beside these factors, Chinese government's export promotion policies play a critical role. To maintain the price competitiveness for Chinese exports in international market, Chinese government has been intervening foreign exchange market to keep RMB exchange rate significantly lower than its equilibrium level. Furthermore, the domestic price of unskilled labors, lands, energies and commodities are regulated by government and kept on a low level. Therefore, the comparative advantage of Chinese exports is over exaggerated by various distorted relative prices. The other side of enlarging trade surplus is the generous subsidies Chinese households provides to the consumers in advanced economies. It's ridiculous for poor Chinese households to provide significant subsidies to wealthy US households. As for the persistent FDI inflows, Chinese government's preference policies also exert an important role. Because the scale of FDI utilization was introduced to the performance appraisal system for local officials, the local governments introduce various preference policies to attract FDI, such as much lower corporate tax, cheap land cost, and fiscal subsidies, etc. As the result of distorted preference policies, some uncompetitive foreign enterprises entered China only for institutional arbitraging. Another consequence is the burgeoning of round tripping FDI, i.e., the domestic capital which first flies away and then enters China again in the form of FDI, whose objective is to obtain the policy preference offered by Chinese government. According to Xiao (2004), the Chinese round tripping FDI to overall FDI ratio is around 40%, which provides another example for resource misallocation.

As the results of continuous twin surplus, China has accumulated a huge stock of foreign exchange reserve. Measure by any indicators such as import volume, short-term and maturing long-term foreign debt and the need to intervene on foreign exchange market, China's foreign exchange reserve scale has already exceeded the optimum criteria. As a result, the costs and risks to hold such a huge reserve are rising above the water. First, the

opportunity cost of holding foreign exchange reserve becomes more prominent. Chinese government invests a large proportion of its reserve on US long-term treasury bonds, whose annual yield is only 3 to 6 percent. At the same time China receives significant FDI inflows every year (the stock of FDI in the end of 2007 reached 742.4 billion USD<sup>3</sup>), and the average annual ROE reached 22%!<sup>4</sup> No doubt China has suffered a lot in this swap of domestic stocks with foreign bonds. Second, the potential US Dollar depreciation will cause the shrinkage of international purchasing power of Chinese foreign exchange reserve. Third, the accumulation of foreign exchange reserve has been causing the corresponding issuing of base money. Although PBOC could do sterilization through issuing central bank bills or raise required reserve ratio, the sterilization is still incomplete and unsustainable. Therefore, the accumulation of foreign exchange reserves would lead to excess liquidity on domestic market, which will cause asset price bubbles or inflation pressure (Zhang and He, 2009). The surge of Chinese stock price and property price from 2005 to 2008, and the inflation pressure from 2007 to 2008, were all correlated to the massive accumulation of foreign exchange reserve at the same time.

Before the burst of subprime crisis, a majority of academic literatures covering global imbalance conclude that the dramatic US dollar depreciation will be the only solution to unravel global imbalance (Roubini and Setser, 2005), which will cause the decline of international purchasing power of Chinese foreign exchange reserve. However, the subprime crisis broke out in a totally different way. The initial loss made on subprime mortgage related financial products was amplified by high leverage, value at risk asset-liability management and mark to market accounting method. The bankruptcy of Lehman Brothers resulted in the collapse of US's Asset Backed Commercial Paper (ABCP) market, which caused the crash of the whole shadow banking system. The subprime crisis brought brand-new financial risks to the safety of Chinese foreign exchange reserve. For example, in the August and September of 2008, Fannie Mae and Freddie Mac nearly went bankruptcy. If this happened, nearly USD 400 billion agency bonds held by Chinese government would turn into waste paper, which reached 10% of China's GDP in 2008. As we will discuss in the next section, the US government's rescue package will bring two

---

<sup>3</sup> The data is quoted from Chinese international investment position statistics released by State Administration of Foreign Exchange, China.

<sup>4</sup> According to a World Bank investigation on 12,400 foreign enterprises in 120 cities of China, the average annual return on investment reached 22 percent in 2005. The data is quoted from Xinhua Agency. "World Bank: The returns on investment of foreign enterprises in China reached 22 percent" (in Chinese), 11 November 2006.

major impacts to the safety of Chinese foreign exchange reserve: the shrinkage of the market value of US treasury bonds, and the potential risk of USD's depreciation.

Table 1: US rescue package

Name	Time	Contents
<b>Fiscal policy</b>		
Economic Stimulus Act of 2008	February 2008	USD 168 billion income tax rebate
Emergency Economic Stabilization Act of 2008	October 2008	USD 700 billion funding for Troubled Assets Relief Program (TARP) to recapitalize the financial institutions
American Recovery and Reinvestment Act of 2009	February 2009	USD 787 billion stimulus package of various spending and tax rebate
<b>Monetary policy</b>		
Interest rate adjustment	September 2007 to December 2008	Lowered the target for Fed funds rate from 5.25% to 0-0.25%
Term Auction Facility (TAF)	December 2008	The Fed auctions collateralized loans with terms of 28 and 84 days to depository institutions. Eligible collateral is the same as that accepted for discount window loans and includes a wide range of financial assets.
The Primary Dealer Credit Facility (PDCF)	March 2008	Eligible borrowers include primary dealers, and the term of the loan is a repurchase agreement, whereby the broker dealer sells a security in exchange for funds through the Fed's discount window. The security acts as collateral.
The Commercial Paper Funding Facility (CPFF)	October 2008	To fund a special purpose vehicle (SPV) that will purchase three-month unsecured and asset-backed commercial paper directly from eligible issuers
Term Asset-Backed Securities Loan Facility (TALF)	November 2008, and March 2009	New York Fed will lend up to USD 1 trillion (originally USD 200 billion) on a non-recourse basis to holders of certain AAA-rated ABS backed by newly and recently originated consumer and small business loans
Purchasing Agency bonds and treasury bonds directly	March 2009	Fed will purchase up to an additional \$750 billion of agency (GSE) MBS, bringing its total purchases up to \$1.25 trillion, and will increase its purchases of agency debt by up to \$100 billion to a total of up to \$200 billion. Moreover, Fed will purchase up to \$300 billion of longer-term Treasury securities during 2009.

Source: Wikipedia (Subprime Crisis; TAF; PDCF; CPFF; TALF).



## II. The rescue package of US government and its risk implications

The US subprime mortgage crisis broke out in the summer of 2007, as a result of the burst of the real estate price bubble. The bankruptcy of Lehman Brothers upgraded the US subprime crisis into global financial crisis. There were persistent liquidity squeeze and credit crunch on US financial markets. As the crisis spread from financial side to real economy side, the US economy slipped into recession in the second half of 2008. To stabilize financial market and to stimulate real economy, US government adopted unprecedented expansionary, systematic and innovative macroeconomic policies (Table 1).

### Fiscal Policies and Risk Implications

As for fiscal policies, from February 2008 to February 2009, US congress approved a USD 168 billion tax rebate act, a USD 700 billion financial institution recapitalization act, and a USD 787 billion government spending and tax rebate act. The sum of the above 3 acts reached USD 1.655 trillion, over 11% of US GDP in 2008. Under the background of economic recession, the surge of fiscal expenditure would unavoidably result in the deterioration of fiscal deficit. As Table 2 shows, the fiscal deficit in 2009 would reach 1.84 trillion USD, and the total scale of US fiscal deficit from 2010 to 2019 is about 7.1 trillion USD. The deficit to GDP ratio from 2009 to 2011 is much higher than recognized sustainable level (3%). However, to make things worse, according to US Office of Management and Budget, the projected fiscal deficit from 2010 to 2019 should increase by 2 trillion USD to reach 9.05 trillion USD.<sup>5</sup>

Table 2: The projection of US fiscal deficit in the following 10 years

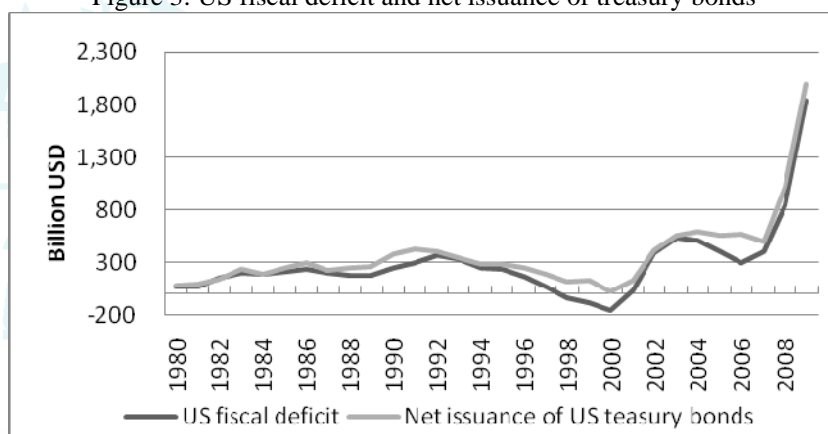
	Billion USD, %											
Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Fiscal Deficit	459	1,841	1,258	929	557	512	536	528	645	675	688	779
Deficit GDP Ratio	3.2%	12.9%	8.5%	6.0%	3.4%	2.9%	2.9%	2.7%	3.2%	3.2%	3.1%	3.4%

Source: US Office of Management and Budget.

<sup>5</sup> Business Standard. "US fiscal deficit to touch \$9.05 trillion in 10 yrs", August 26 2009, available at <http://www.business-standard.com/india/news/us-fiscal-deficit-to-touch-905-trillion-in-10-yrs/07/24/71839/on>.

The problem is how US government could finance the fiscal deficit. Theoretically, US government has three ways to finance the fiscal expenditure: raising tax, issuing treasury bonds, and printing money. During the period of economic recession, raising tax is not feasible. Printing money directly will cause inflation pressure and asset price bubbles. Therefore, issuing more treasury bonds is the only practical way for US government. As shown in Figure 3, from 1980 to 2007, the average annual US fiscal deficit is 212 billion USD, and the average net issuance of treasury bonds is 292 billion USD, which means that the issuing of treasury debt could mainly cover the fiscal deficit. However, the projected US fiscal deficit reached 1.84 trillion USD in 2009, and the projected net issuance of US treasury debts in the same year would surpass USD 2 trillion.

Figure 3: US fiscal deficit and net issuance of treasury bonds



Source: US Treasury, Bureau of Economic Analysis.

Then the question is whether the demand of US treasury bonds could match the surging supply. At the end of 2008, the outstanding of US treasury bonds was USD 10.7 trillion, among which US government entities held USD 4.3 trillion (about 41%), and the public held USD 6.4 trillion (about 59%). As for the public holding of US treasury bonds, the foreign investors held USD 3.1 trillion. To simplify, 40% of potential demand for US treasury bonds comes from US government entities, 30% comes from foreign investors, and the rest 30% comes from US domestic investors. We assume that the US government entities could digest 40% of the 2 trillion USD US treasury bonds issuance in 2009 again. Therefore, whether the demand could match the supply would depend on the demand from domestic and overseas investors.

As for the overseas investors, a majority demand comes from the East Asian central banks and sovereign investors from oil exporting countries. As developed countries slipped into recession, the global demand kept shrinking. So the export of East Asian countries was very weak, and the speed of foreign exchange reserve accumulation declined. Therefore, the incremental demand for US treasury bonds from East Asian central bank would be limited. The drop of oil price caused the decline of oil exporting revenue, hence the incremental

demand for US treasury bonds from oil exporting countries also could not be counted on.

As for the domestic private investors, two major parts are financial institutions and households. During the period of deleveraging, the demand of financial institution for US treasury bonds would increase because of the effect of safety heaven. However, if the deleveraging process completed and financial institutions began to allocate more risky asset, the demand for US treasury bonds would decline. There are ample evidences which demonstrate that the deleveraging process of US financial institutions has already completed in the first half of 2009. US household suffered a lot in wealth during the subprime crisis, so their new demand for US treasury bonds could not grow dramatically, even if we consider that the household saving rate has been rising significantly.

To summarize, we argue that the market demand for US treasury bonds maybe could not keep the pace of market supply in the next several years. The demand-supply gap will cause the surging of the yields of new issuing US treasury bonds, which will result in the decline of market value of the outstanding treasury bond stock consequently. The major holders of US treasury bonds will suffer a huge loss.

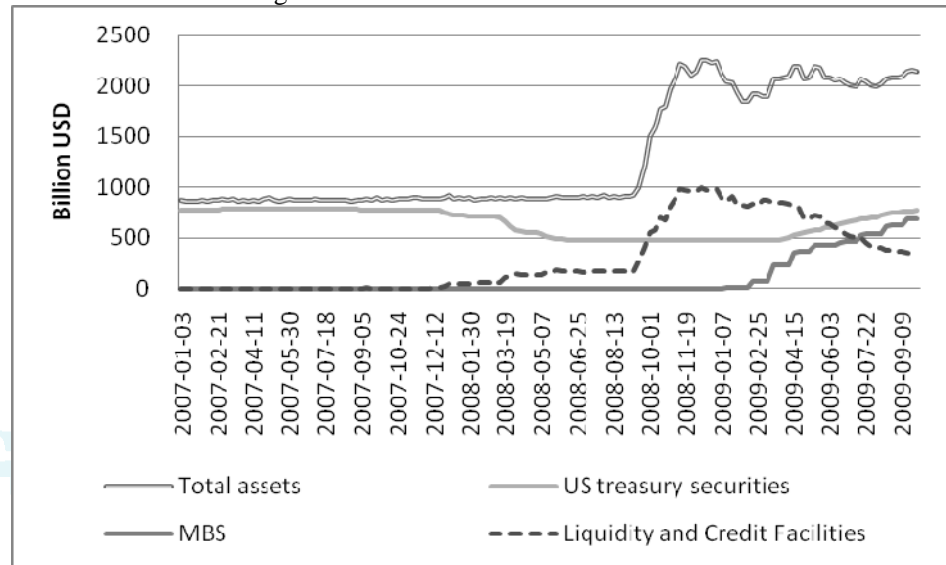
To restrain the rise of treasury bonds' yield and to appease the major holders, US government must fill up the demand-supply gap on treasury bonds market. Therefore, it was reasonable for Fed to announce in March 2009 that it will purchase USD 300 billion long-term US treasury bonds in 2009. This kind of quantitative easing did help to stabilize the treasury bond market, however it introduce new risk, i.e. the risk of inflation and USD depreciation.

## **Monetary Policies and Risk Implications**

As shown in Table 1, from September 2007 to December 2008, the Fed funds rate had been cut from 5.25% to 0-0.25%. The space for further interest rate cut is very limited. Therefore, from December 2008, Fed began to adopt new innovative policies measures such as TAF, PDCF, CPFF and TALF, etc. The theme of these quantitative easing measures was that Fed injected liquidity directly into various financial institutions to mitigate the liquidity squeeze, and to keep the lending cost on a relative low level. Although these quantitative easing innovations made sense to stabilize the short-term financing market, they also brought new risks.

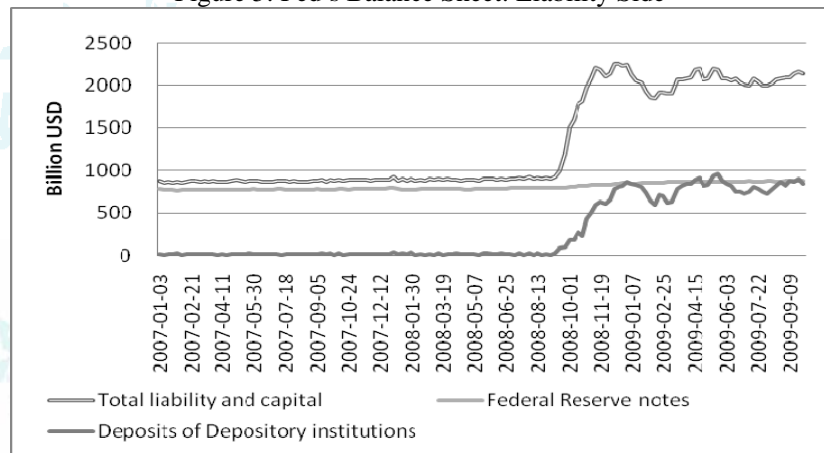
The frequently use of quantitative easing resulted in the remarkable expansion of Fed's balance sheet (Figure 4). The total assets of Fed increased from 800-900 billion USD before September 2008 to over 2.1 trillion in September 2009. Looking at the break down of assets, we found that it was the Fed's increasing holding of liquidity and credit facilities (such as TAF, PDCF and CPFF) and MBS which had caused the expansion of Fed's total assets. At the end of September 2009, the ratio of liquidity and credit facilities and MBS to total assets reached 47.7% (compared to zero percent two years ago), and the ratio of US treasury securities holding by Fed to Fed's total assets decreased to 35.9% (compared to 87.2% two years ago).

Figure 4: Fed's Balance Sheet: Asset Side



Source: Federal Reserve.

Figure 5: Fed's Balance Sheet: Liability Side



Source: Federal Reserve.

Why the expansion of Fed's balance sheet since the burst of global financial crisis has not caused inflation pressure till now? To analyze the Fed's balance sheet from liability and capital side help us to find the answer. As Figure 5 shows, from September 2008 to September 2009, the surging of Fed's total liabilities has been mainly driven by the deposits of depository institutions in Fed. Because the financial market has been in great turbulence and the real economy has been very weak, the commercial banks could not find enough profitable loan projects. Therefore the commercial banks deposit a large proportion of funds in Fed's reserve account. In other words, the injection of liquidities by the Fed has not led

to the growth of banking credit and broad money.

However, things could change very fast. Once the financial market stabilizes, the deleveraging process of financial institutions completes and real economy began to rebound, the commercial banks will decrease their deposit in Fed and increase bank lending dramatically. With the growing of monetary multiplier, the injected liquidity will translate into the rapid growth of banking credit. Therefore, the inflation and corresponding US dollar depreciation will become realistic menace.

Fed's chairman Ben Bernanke was quite confidence that Fed could achieve a smooth exit from quantitative easing measures,<sup>6</sup> through raising the interest rate paid on reserve balances, using reverse repo operations, issuing Fed bills, and selling assets directly. However, none of the above exit strategies would be easy and cheap. For example, considering that a large proportion of assets held by Fed are actually toxic assets purchased from troubled financial institutions, Fed can only sell them by providing a large discount, which will cause the loss of Fed. Both issuing Fed bills and raising interest rate for reserve balances will increase the Fed's expenditure significantly. Reverse repo only postpones the exit pressure. To summarize, the exit strategies would lead to the loss of Fed and exacerbate fiscal balance consequently. Therefore, it is difficult for the exit strategies to be executed smoothly without bringing new impacts to US fiscal deficit or aggravating inflation pressure. Furthermore, Fed will assume great pressure from congress and public if Fed executes exit strategies in time, because Fed takes a risk to kill the green shoots of economic recovery. However, if Fed could not exit quantitative easing measures in time, the potential inflation and relating US dollar depreciation will be unavoidable.

### **III. Chinese government's responses**

As a result of exporting-led development strategy, China has accumulated a huge foreign exchange reserve. After the burst of global financial crisis, the US government's rescue package is bringing new risks to the safety of Chinese foreign exchange reserve: the potential decline of the market value of US treasury bonds, and the potential US dollar

---

<sup>6</sup> Financial Times. "Bernanke Outlines Fed's Exit Strategy", July 21 2009.

depreciation. To mitigate the impacts of global financial crisis to Chinese foreign exchange, Chinese government has taken fast and systematic countermeasures, which include criticizing US policies directly, speeding up the diversification of reserve assets, encouraging SOEs to make overseas investment, promoting RMB internationalization, and proposing a super-sovereign reserve currency.

## **Criticizing US policies directly**

In March 2009, Chinese Premier Wen Jiabao expressed his concern over China's US treasury bonds in his annual press conference. "We have lent a huge amount of money to the U.S., so of course we are concerned about the safety of our assets. Frankly speaking, I do have some worries." Then Premier Wen required US government to "maintain its credibility, honor its commitments and guarantee the security of Chinese assets".<sup>7</sup> This is the first time for Chinese top leaders to express their worries about the safety of Chinese foreign exchange reserve.

Although we don't think that Premier Wen's expression and President Obama's rapid feedback could strengthen the safety of Chinese foreign exchange reserve by themselves, we still think that Premier Wen's expression is correct and active. No one believe that China will sell a large proportion of its US treasury bonds in the short term, because this will do harm to Chinese own interest. However, as the largest holder of US treasury bonds, China's statement did exert a pressure to US government's policies. Beside this, the diversification of foreign exchange reserve investment by emerging and developing countries is bringing a significant challenge to US dollar's status as a global reserve currency. To keep the competitiveness of US dollar as an international reserve money and to maintain international investor's confidence to US dollar, US government has to behave more responsibly and try to control the fiscal deficit and inflation pressure to avoid the dramatic US dollar's depreciation.

Moreover, Chinese government's criticism to US policies helped to increasing the former's bargaining power in various bilateral negotiations. For example, whether Chinese

---

<sup>7</sup> The Wall Street Journal. "Wen Voices Concern Over China's U.S. Treasury", March 13, 2009.

government would continue to purchase US treasury bonds has become a new weapon used by Chinese delegation in several rounds of Strategic and Economic Dialogue between China and United States. The balance reached by two sides might be: China commits to continue to buy US treasury bonds, and the United States commits not to require RMB to appreciate against USD.

## **Speeding up Diversification**

In September 2007, Chinese Sovereign Wealth Fund (SWF), China Investment Corporation (CIC) was established. Chinese government injected USD 200 billion foreign assets into CIC, which made it one of the largest SWFs around the world. The major task of CIC is to invest on more risky and diversified asset portfolio, compared with the conservative investment strategy of State Administration of Foreign Exchange (SAFE). From September 2007 to the bankruptcy of Lehman Brothers in September 2008, the investment portfolio of CIC was concentrated on financial institutions, such as Black Stones and Morgan Stanley. The financial tsunami led to the crash of global stock prices, which resulted in the significant loss of CIC. Under the criticism of State Council and the public, CIC's investment strategy became more conservative after September 2008, and about 90% of its investment portfolio was allocated in cash and cash equivalents. However, with the stabilizing and rebounding of global financial markets, CIC became active again since the 2<sup>nd</sup> quarter of 2009. The focus of CIC's new investment portfolio changed from financial sector to natural resources and commodities. From January 2009 to September 2009, CIC had invested USD 10 billion into overseas M&A.<sup>8</sup>

The establishment of CIC introduced competitive pressure to SAFE in the management of Chinese foreign exchange reserve (Eaton and Zhang, 2009). SAFE began to adjust its traditional investment strategy. In the past SAFE's portfolio was focusing on treasury bonds and agency bonds of advanced economies. After the establishment of CIC, SAFE expanded its investment on more risky assets such as corporate bonds and stocks. For example, as disclosed by US treasury, from June 30 2007 to June 30 2008, the US corporate stocks held by Chinese investor rose from USD 28.5 Billion to USD 99.5 Billion, and it was believed that the majority of incremental investment came from SAFE (Setser, 2009). SAFE also

---

<sup>8</sup> Financial Times. "CIC buys Stake in Kazakh Oil and Gas Group", October 1, 2009.

purchased some minority shares of dozens of UK or Australian listed companies through its subsidiary corporation in Hong Kong and London. After the burst of global financial crisis in September 2008, SAFE suffered a lot from its aggressive investment toward risky assets. Therefore, the investment style of SAFE became more conservative again. In any case, after the crisis, the diversification of Chinese foreign exchange reserve will continue not only in asset composition but also in currency composition.

## **Encouraging SOEs to make overseas M&A**

After the burst of US subprime crisis, the global stock markets experienced a dramatic crash. The valuation of certain companies' shares became more attractive compared to that of pre-crisis. On the other hand, as a fast-growing developing economy, China gets more and more dependent on the imported energy and commodities. Therefore, Chinese government has been promoting the overseas investment of SOEs since 2007, especially in the industry of energy and commodities. According to Dealogic, the overseas M&A by Chinese enterprises reached 9.6, 25.4, 50 and 46 billion USD respectively from 2005 to 2009.<sup>9</sup>

Behind the overseas M&A of SOEs, Chinese policy banks are responsible for providing relative loans, and the sources of foreign exchange loans come from foreign exchange reserve. In January 2008, the Aluminum Corporation of China (Chinalco) and the U.S. aluminum producer Alcoa bought a 12% stake in the Britain-listed company Rio Tinto, an iron ore giant, with the cost of USD 14.05 billion.<sup>10</sup> The direct objective of Chinalco's investment on Rio Tinto was to block the BHP Billiton's merger over Rio Tinto. Because China was the largest iron ore importer over the world, the BHP Billiton's merger over Rio Tinto would strengthen the seller's monopoly in the iron ore industry, which will certainly hurt China's interest. China Development Bank (CDB) played a critical role of providing M&A loans to support Chinalco's investment on Rio Tinto. It is necessary to mention that CDB got a USD 20 billion capital injection from Central Huijin, a wholly owned subsidiary of CIC. From the above funding chain, we could understand how Chinese government is using foreign exchange reserve to promote SOE's outbound M&A. Although it is a pity that

---

<sup>9</sup> Financial Times. "China's Thirst for Mergers Barely Affected by Crisis", December 31, 2009.

<sup>10</sup> Xinhua Agency. "Chinalco, Alcoa buy 12% stake of Rio Tinto's UK-listed firm", February 1, 2008.



Rio Tinto refused Chinalco's another bidding of USD 19.5 billion in June 2009, more and more Chinese SOEs have been making success in overseas M&A. For example, in April 2009, Australian government approved a revised USD 850 million Chinese Minmetals' bid for mines owned by OZ minerals.<sup>11</sup>

## **Promoting RMB Internationalization**

Before global financial crisis, the process of RMB internationalization had been restrained by capital account control, RMB's inconvertibility, and underdeveloped financial markets. Moreover, the incentive for Chinese government to promote RMB internationalization was not so strong. However, after the burst of global financial crisis, recognizing the potential risk of over-relying on US dollar in international trade and capital flow, Chinese government changed its mind and became much more enthusiastic about RMB internationalization under limited openness of capital account (Zhang, 2009).

From the end of 2008 till now, PBOC has signed bilateral local currency swaps worth a total of RMB 650 billion with Korea, Hong Kong, Malaysia, Belorussia, Indonesia and Argentina. These bilateral local currency swaps are seen as a supporting mechanism to promote the use of RMB in cross-border trade settlements. After the State Council executive meeting on April 8, 2009, Chinese government announced the first batch of cities for RMB settlement experiment, which include Shanghai, Guangzhou, Shenzhen, Zhuhai and Dongguan. In July 2009, the experiment of using RMB in cross-border trade settlement starts. Moreover, Chinese government issued 6 billion RMB denominated treasury bonds in Hong Kong unprecedentedly in September 2009.

No doubt Chinese government will continue to promote RMB internationalization in the future, under the precondition of limited capital account openness. First, an offshore RMB settlement center might be established in Hong Kong in the next couple of years, which could facilitate overseas investors to convert RMB with other currencies more freely. Second, an onshore or offshore RMB forward exchange rate market might be founded in the future, which help overseas investors to hedge off exchange rate risk while holding

---

<sup>11</sup> Reuters. "Update 2- Australia Approves New Minmetals-OZ Minerals Deal", April 23, 2009.

RMB positions. Third, more RMB denominated financial assets which are issued by Chinese government, financial institutions and corporations will be provided on offshore financial center such as Hong Kong. Fourth, and more and more foreign companies and financial institutions will be invited to issue RMB denominated bonds or even stocks on Chinese domestic financial market. However, before RMB developing into a real international currency, the capital account should be fully opened and RMB exchange rate should be determined by market forces.

### **Proposing a super-sovereign reserve currency**

In March 2009, just before the London G20 summit, the governor of PBOC, Mr. Zhou Xiaochuan, published his article “Reflections on Reforming the International Monetary System” (Zhou, 2009). Zhou pointed out that Triffin Dilemma could not be solved as long as a national currency is used as a global reserve currency, because any country which issuing reserve currency could not balance the domestic monetary policy goals with the needs of providing international liquidity. Therefore, a super-sovereign reserve currency should be created to overcome the persistent conflicts. This was the first time Chinese top leaders revealed their attitudes toward the evolution of international monetary system, therefore it aroused great attention and feedback from international community (Zhang, 2009).

It was very difficult to create a brand-new super-sovereign reserve currency from zero, so Zhou suggested that the Special Drawing Rights (SDR) could be developed into a potential global reserve currency. Certainly, the Chinese government’s support over SDR would be based on the following conditions: First, the currency basket of SDR should be expanded to adopt more currencies of new emerging countries such as CNY and Indian Rupiah; Second, SDR should be widely used in international trade and investment, such as private sector settlements, the denomination of commodity price and foreign exchange reserves, etc.; Third, the quantity of SDR should be enlarged and the distribution of SDR should be more equitable; Fourth, the governance of IMF should be improved to reflects more interest and voice of new emerging countries and developing countries.

Since the burst of global financial crisis till now, IMF's resource has been greatly strengthened, of which China played an important role. From August 2009 to September 2009, IMF issued a total scale of USD 283 billion new SDR to its member countries. In September 2009, Chinese government announced that it will purchase USD 50 billion SDR denominated IMF bonds, and Brazil and Russia committed another purchase of USD 10 billion. Chinese government was also interested in the creation of Substitution Account inside IMF, which means that member countries could deposit their extra US dollar denominated financial assets into an account of IMF and transformed into SDR denominated assets.

#### **IV. Conclusion**

As the result of continuous twin surplus, China has accumulated a huge foreign exchange reserve. The over 2 trillion reserve not only reflects serious resource misallocation, but also brings new costs and risks. After the burst of global financial crisis, the US government's rescue package introduced two types of risks to the safety of Chinese foreign exchange reserve: the potential decline of market value of US treasury bonds, and the potential US dollar depreciation. To mitigate the potential risks, Chinese government has adopted prompt and systematic policy measures, including criticizing US policies directly, speeding up diversification of reserve assets, encouraging SOEs to make overseas M&A, promoting RMB internationalization and proposing to establish a super-sovereign global reserve currency.

Although the above countermeasures are necessary and effective, they are not enough. These solutions could not eliminate all the risks which Chinese foreign exchange reserve is facing. To speak frankly, Chinese foreign exchange reserve is doomed to suffer some loss in the future, and this is an inevitable cost China must pay for its traditional grow model. To solve the problem of reserve safety in the root, Chinese government should not only diversify the foreign exchange reserve stock, but also decrease the future accumulation of foreign exchange reserve. Chinese government should speed up the necessary structural adjustments such as increasing household income, providing more social public goods, stimulating domestic consumption, opening service sector, liberalizing commodity prices,

decreasing the intervention on interest rate and exchange rate, and abolishing distorting preference policies toward export and FDI, etc. The transition of Chinese growth model from export and investment-led to domestic consumption driven could not only stabilize Chinese foreign exchange reserve, but also promote the sustainable growth of Chinese economy.

## Reference:

Eaton, Sarah and Zhang, Ming. “A Principal-Agent Analysis of China’s Sovereign Wealth System: Byzantine by Design”, Research Center for International Finance, Working Paper No. 0910, Chinese Academy of Social Science, August 2009.

Roubini, Nouriel and Setser, Brad. “Will the Bretton Woods 2 Regime Unravel Soon? The Risk of a Hard Landing in 2005-2006”, paper prepared for the Symposium on the “Revived Bretton Woods System: A New Paradigm for Asian Development” organized by the Federal Reserve Bank of San Francisco and UC Berkeley, San Francisco, February 4<sup>th</sup> 2005.

Setser, Brad. “SAFE seems to have started buying US equities in the spring of 2007 and didn’t stop until July 2008”, March 15 2009. Available from <http://blogs.cfr.org/setster/2009/03/15>.

Williamson, John. “The Management of Capital Flow”, Paper published in Pensamiento Iberoamericano, January-June 1995.

Xiao, Geng. “People’s Republic China’s Round Tripping FDI: Scale, Causes and Implications”, *LAEBA Working Paper*, No.24, December 2004.

Yu, Yongding. “Global Imbalance and China”, Paper prepared for Finch Lecture, Melbourne University, 17 October 2006.

Zhang, Ming and He, Fan. “China’s Sovereign Wealth Fund: Weakness and Challenges”, *China & World Economy*, No. 1, Volume 17, January – February 2009.

Zhang Ming. “China’s New International Financial Strategy amid the Global Financial Crisis”, *China & World Economy*, No. 5, Volume 17, September – October 2009.

Zhou Xiaochuan. “Thought on reforming international monetary system,” March 23, 2009. Available from: <http://www.pbc.gov.cn/detail.asp?col=4200&id=279>.

声明：本报告非成熟稿件，仅供内部讨论。报告版权为中国社会科学院世界经济与政治研究所国际金融研究中心所有，未经许可，不得以任何形式翻版、复制、上网和刊登。