View With Japan Experience, This Financial Crisis Will Last Longer Than Expected

Ching Ya Hsiao[1]
Graduate Institute of Management Sciences, Tamkang University, Taiwan
George Chun Ming Chien[2]
Graduate Institute of Management Sciences, Tamkang University, Taiwan
Horng Jinh Chang[3]
Asia University, Taiwan

Abstract

Under Basel I requirement, the Japanese banks had to reduce their assets and caused economic slowing down since 1990. Due to the sub-prime crisis, most international financial institutions met capital insufficient problems. An easiler way for the troubled bankers is to reduce the banks' asset volume. If most bankers choose to adopt the deleverage policy, the economic will meet asset price deflation period. This article uses Japanese economic slow experience to conclude the US crisis started from 2007 will not end as most expected.

Keywords: Basel, Japan banks, Sub-prime crisis, deleveraged , deflation, economic slow

1. Introduction

According to IMF (1998), from past experience, there are five major financial crises:

(1) Great Depression
(2) US saving and loan crisis
(3) Swedish banking crisis
(4) Japan banking crisis
(5) US Sub-prime crisis

The similarities among the crises were the deregulation of the financial environment and cheap funding cost which encouraged the investors and bankers to leverage their capital on the investment. The fearless action finally pushed the assets price to Minsky's[1] "ponzi phase" toward the crash of asset bubbles. The crash of asset

---

[1] Minsky Theory: Hyman Minsk, Ph.D. (1919-1996), was an economist and professor at Washington University in St. Louis, Minsky's research focused on the understanding and explanation of financial crisis. Minsky broke down the process from stability to instability into three types of debt phases: hedge, speculative, Ponzi.

bubbles will lead the economic environment to the “reverse Minsky process”. At the process, the falling of asset price will lead to higher delinquency rate of the asset holders and made the lenders to suffer more. To avoid the scenario, these financial institutions have to deleverage their asset size or call back the lending loans. The deleverage process and wipe out the toxic assets will make the lending banks to get loss and suffered their capital. A research from Wall Street Journal on May, 2009 shows for 940 medium and small US banks, the estimated loan loss for commercial real estate and others were over 200 billion US dollars. If wiping out the loss from banks’ capital, there will be 600 banks has capital requirement problems. To fulfill the minium capital requirement, the banks have to raise capital or reduce their asset size. Unlike other sectors, the financial industry made their profits by leverage. If the banks adopt the deleverage procedure, it is almost impossible for the equity investors to get as high returns as they used to be. Raising capital has became a big problem for the banks at financial crisis time since credit rating “A” bank could file chapter 11 suddenly. In comparison with raising capital, reducing the asset volume seems to be an easier way for the bankers to adopt. The actions will cause “lack of lending”, “trouble of refinance” and the economy will contract in income, spending and jobs (Martin 2002). At last, it will prolong the recession until the financial sectors adjusted their positions to the regulatory base.

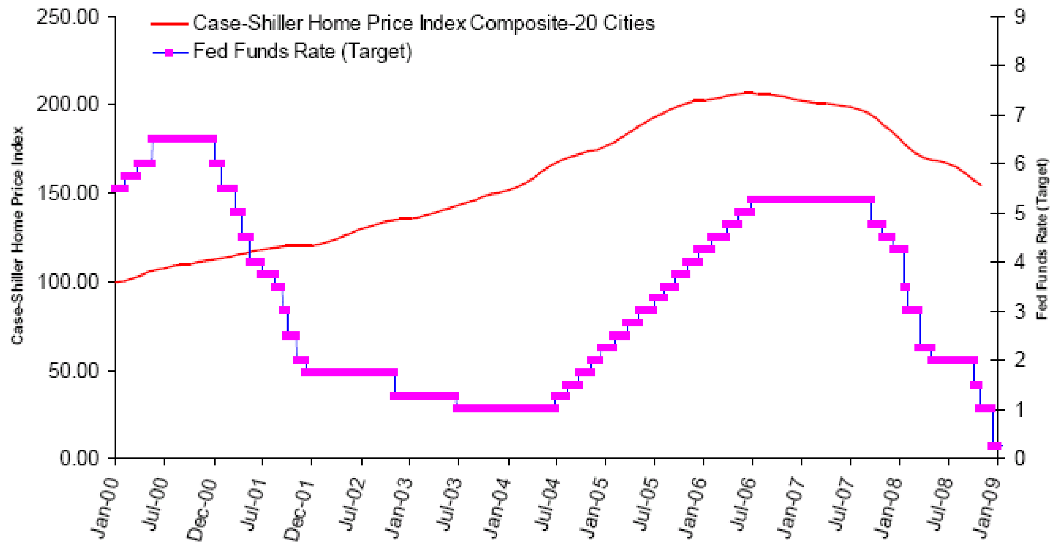
The sub-prime crisis has already lasted for two years. Many people think the crisis might not last long. For example, on June 9, 2009, the US Treasury Secretary Timothy Geithner said “ The force of global storm is receding a bit.” On June 14, 2009, according to CBC News, “the group of eight major industrialized countries has begun preparing for an economic recovery, acknowledging on signs of stabilization in one economics and agreeing to ask the International Monetary Fund (IMF) to study ways to unwind hefty stimulus packages.”

This article used Japan experience at 1990 till now as examples. The capital adjustment at the financial institutions will cause the crisis this time lasted longer than expected.

2.The sub-prime crisis:

The house price of USA has been boomed for several years since 2000.The Federal Reserve stopped the rate cutting policy and started to increase the Federal Fund rate from 1% to 5% since 2004. The tighten monetary policy effected the ability of mortgage borrowers to pay back their interest; the real estate price uptrend met its obstacles on 2006. (See Fig 1)

Figure 1 Fed Funds Rate vs. Home Price Index



Source: Nomura International (Hong Kong) Limited

The devalue of real estate and the mortgage rate increment made the delinquency rate of home loan borrowers soared. The high delinquency of home loan borrowers caused much trouble to big banks than community banks due to the popular of the structured products (like CBO[2], CDO[3], etc) since 2003. Unlike the old way, the mortgage loans were sold to the investment banks and repacked into structured products like CDO or CBO. These structured products were marked with high rating grade by the professional rating agencies and then sold to the instituational investors mostly banks or insurance companies. The characteristic of these products are highly complexity, highly leverage and illiquidity. The value of structured products were base on “mark to market’ principle. The high delinquency rate of mortgage borrowers made the structured products dried out of liquidity and the bid price for such products at the market soon dropped more than expected. The first victim were the leverage funds. The funds levelaged their long duration high rating structured assets for short term Repo to maxium their profits to the investors. At illiquidity period, the pledged assets soon got the “margin call” from the loaning banks. The High-Grade Structured Credit Fund and The Bear Stearns High-Grade Structured Credit Enhanced Leverage Fund seemed to be the first fund under management of the big investing banks short

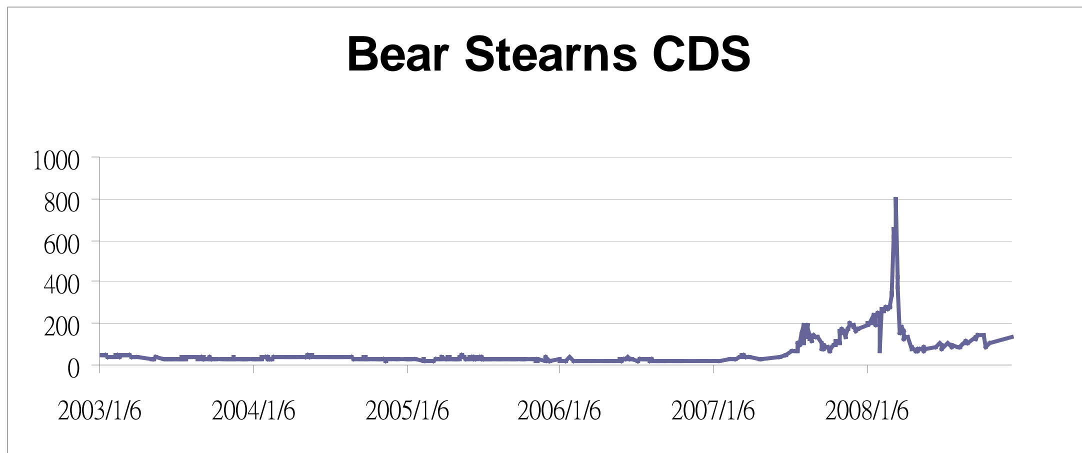
---

[2] CBO. An investment-grade bond backed by a large, diversified pool of diversified bonds. Usually broken down into tiers with varying degrees of risk and varying interest rates.

[3] An investment-grade security backed by a pool of bonds, loans and other assets. CDOs do not specialize in one type of debt but are often non-mortgage loans or bonds.

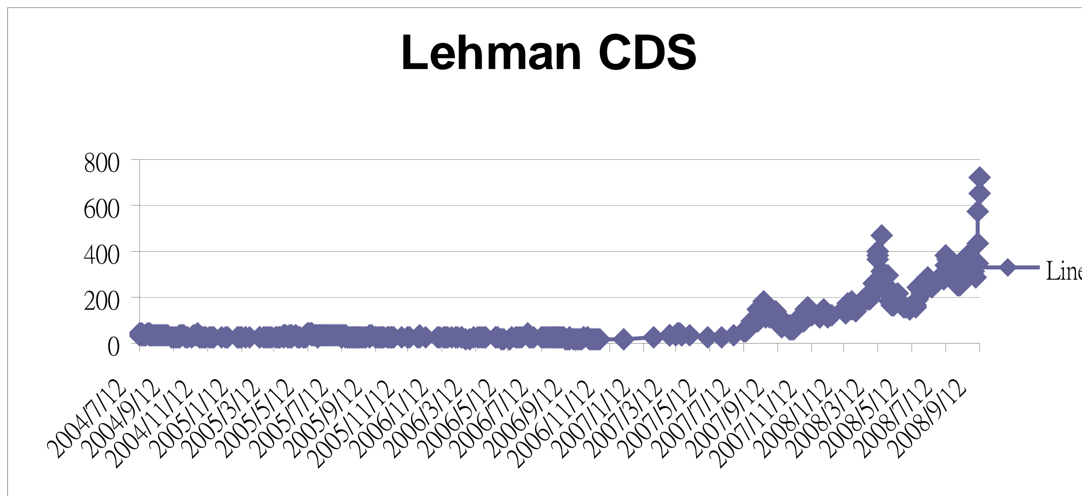
of cash and went into bankruptcy. Soon the market participants found out some assets value list as level 3 assets[4] under the balance sheet of financial institutions be far less than the accounting value which may jeopardize the big banks. The jump CDS (credit default swap) of the big banks showed a serious concern from investors.(See Fig 2 and Fig 3)

Figure 2 Bear Stearns CDS



Source: Bloomberg

Figure 3 Lehman Brothers CDS



Source: Bloomberg

---

[4] Assets whose fair value cannot be determined by using observable measures, such as market prices or models. Level 3 assets are typically very illiquid, and fair values can only be calculated using estimates or risk-adjusted value ranges. In addition to Level 1 and Level 2 assets (both of which have more accurate fair values), Level 3 assets must be reported on by all publicly traded companies as of 2008.

The March 16, 2008 merger of Bear Stearns and JP Morgan told the market participants that the banks are too big to fail and the government would not allow big banks to fail and financial crisis might be over soon. The suddenly bankruptcy of Lehman Brothers stunned international markets and made the local US Sub-prime crisis became an international event and forced all the G20 Nations to jump in to put out the fire caused by US. These governments adopted some loosen monetry policies trying to save the falling banking system. To March 2009, the loosen monetary policies seemed to be in effect. The stock market started to rebound. The Dow Jones Industrial Average rebound from 6547.01 on March 9, 2009 to 8799.25 on June 12 , 2009; the rebound was almost 30% from the bottom. Does the rebound of the stock market mean it was the end of the Sub-prime crisis? With developments of past historical crises and the experience of Japan, this article thinks the period of Sub-prime crisis will not be over soon and it will last longer than expected.(See Fig.4)

Figure 4. The Dow Jones Industrial Average

Source: http://bigcharts.marketwatch.com/quickchart/quickchar

The US-born financial crisis can be divided into four stages (See Fig.5). by Morgan Stanley Research (2009):

Phase I: Sub-prime loss triggered hedge fund failure (June 07 – October 07)

-Bear Stearns revealed that it had spent $3.2bn bailing out its two hedge funds exposed to the sub-prime market.

_ In June and July, hedge fund Sowood Capital lost half of its capital ($1.5bn) due to corporate spread widening. It was taken over by Citadel Investment in late July.

_ In early August, short-term credit market froze up after BNP Paribas suspended three hedge funds due to sub-prime losses.
_ Central banks around the world pumped liquidity into the markets by cutting rates and injecting cash into the money markets.
_ Overnight bank lending dried up as banks fear default from one another.
_ SIVs and other structured products suffered downgrades and big losses as commercial paper markets disappeared.

Phase II: Huge bank write-down revealed(October 07 – January 08)

_ Major banks and brokerages around the world announced huge write down sand losses during Q3 and Q4 2007.
_ Credit spreads widened significantly.
_ Sovereign Wealth Funds bought big stakes in the majors banks that suffered big losses.
_ Fed announced the Term Auction Facility to fight the credit crunch. In January 08, after reporting big losses due to the structured credit. Products they guarantee, all three major mono-line bond insurers received rating downgrade. This triggered new round of CDO downgrades.

Phase III: Market Liquidity Crisis (January 08 – June 08)

_ The troubles at the monocline bond insurers continued to dog the financial markets.
_ The Fed announced Term Security Lending Facility, accepting as collateral highly rated non-agency mortgage-backed securities.
_ Spreads for high quality assets (agencies, residential AAA assets) have widened across sectors as leverage/financing has declined due to higher haircuts from repo-desks and declining asset-backed CP outstanding, as well as forced asset sales from hedge funds (Peloton, Thornburg and Carlyle) and broker dealers.
_ Bear Stearns suffered run-on-the-bank from its counter parties, after questions about the investment bank's finances surfaced.
_ US Fed arranged the rescue of Bear Stearns through JPMorgan Chase.
_ The Fed created the Primary Dealer Credit Facility to provide emergency liquidity to the market. The PDCF allows the Fed to lend to primary dealers, including those who are not considered banks or depository institutions.

Phase IV: Global financial system crisis (June 08 – Now)

_ US government bailed out Citigroup on November 24th.
_ AIG sold $39.3 billion in assets to NY Fed's fund on December 15.
_ President Bush ordered an emergency bailout of the U.S. auto industry on December.19, offering $17.4 billion in rescue loans and demanding tough concessions from the deeply troubled carmakers and their workers.
_ Citigroup sold majority stake of its Smith Barney unit to Morgan Stanley to form a

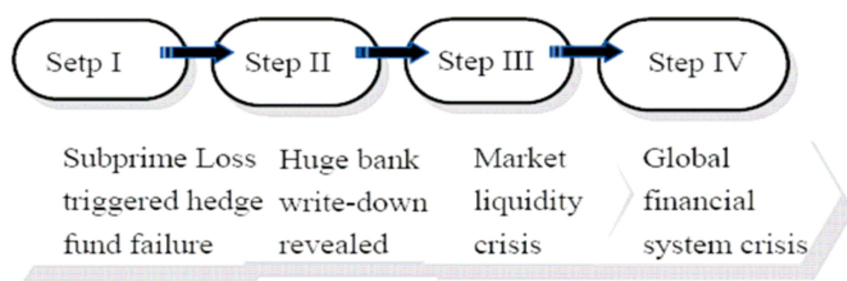
join venture.

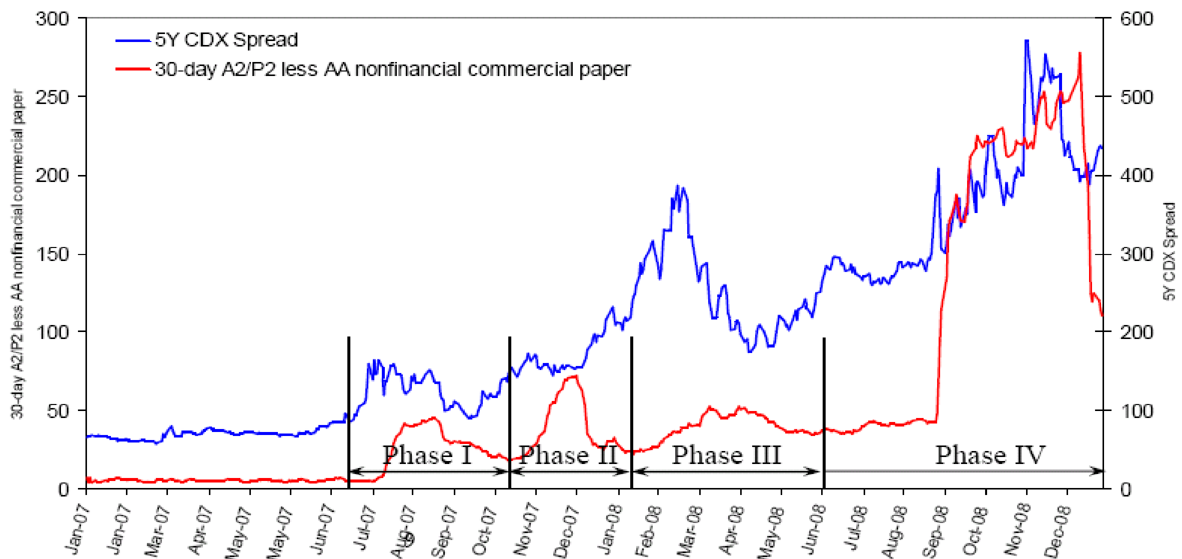
_ Deutsche Bank expected to incur a loss of 4.8 billion Euros for Q4 2008.

_ Bank of America reported $2.39 billion loss for Q4 2008, received additional $20 billion fresh capital from the government.

_ Uncertainty of the leading big banks since the failure of Lehman Brothers

Figure 5. Four Phases of the Credit Crisis





Source: Nomura International (Hong Kong) Limited

As we know, a healthy economic system relies much on the healthy financial system. Up to now, the global financial system seems to be highly effected. Only few banks passed the US government stress test. Up to now there is no data showing the financial sector has better performance. It is very unlikely that an economic can go well without the support of healthy financial system.

3.Past history:

A review of past financial crises, it can be found that financial crises involve multiple perspectives and can be triggered by several factors, such as currency depreciation, bank bankruptcy, excessive foreign debt, and etc. According to IMF

(1998), there are four types of financial crises: (1) currency crisis: e.g. 1995 Mexican Peso crisis; (2) banking crisis: e.g. the Japan's banking crisis in early 1998; (3) foreign debt crisis: e.g. the Latin American debt crisis during 1980s; (4) systematic financial crisis: any two of the above crises occur at the same time and cause effects on each other. This type of crisis is also called twin crisis. A review of major financial crises in history is presented as follows. (1) The Great Depression of 1930: The Wall Street Crash of 1929 ushered in a global economic recession in the 1930s. During this period of time, more than 700 US banks went bankrupt, and the unemployment rate reached 25%. During 1933, the depression was at its trough, with 1/4 labor population unemployed. (2) War-induced economic growth in the 1940s: After Japan's attack on Pearl Harbor in 1941, the war economy emerged. In 1942, production of war supplies was increased, while that of household supplies was decreased. In 1945, there was an economic downturn. Government intervention led to serious inflation and labor strikes. (3) The era of Eisenhower: War induced economic growth. In 1954, the stock market reached its peak, the highest level since 1929. The 18-month bull market ended in 1957, with S&P 500 down by 19.4%. The recession of 1958 forced over 5 million people out of work. (4) Social revolution of the 1960s: In 1963, the Kennedy administration had the largest budget deficit, 10 billion US dollars. In 1967, Department of Commerce announced that personal income reached an all-time high. (5) The energy crisis of 1970s: The oil crisis led to serious inflation, federal funds rate to 19%, and hike of oil price by 20 times. In 1973, usage of energy in related industries was significantly decreased. The unemployment rate as of March 1975 reached 8.7%, the highest level since 1941. In 1979, Bank of America increased the base rate to a historic high of 15.7%. (6) Reagon economics of 1989s: Reagan signed budget and tax-cut bills in 1981. On Black Monday (Monday, Oct 19, 1987), the Dow Jones Industrial Average (DJIA) plunged by 508.32 points. In 1989, George H. W. Bush signed an emergency rescue bill for the nation's troubled savings and loan institutions. The rescue bill called for spending $166 billion in the next 10 years, with 3/4 of the spending to be paid by taxpayers. In the same year, slump of GDP also occurred in Argentina and Turkey due to financial storms. (7) The bear market of 1970s, the longest in history: Finland, Sweden, and Norway encountered a banking crisis in 1992. The savings and loan crisis spanned from late 1980s to early 1990s. The banking industry had the most serious collapse since the Great Depression. More than 1000 mutual savings bank went bankrupt. The total asset of these banks exceeded US$500 billion. The burst of the Japanese bubble economy in 1996 resulted in a slump of house prices by 50% and a recession that lasted 10 years. In 1999, DJIA closed above 10,000 for the first time in history. (8) After 2000: Due to the rise of unemployment rate, Bush signed a tax-cut bill in June 2001, and Federal Reserve

Board continued to cut interest rates to stimulate economy. In the wake of the "911 Terrorist Attack" in 2001, the stock markets plunged by 16.2%. The Iraq War in 2003 increased uncertainty over the economic recovery. The bursting of the dot-com bubble in 2002 also caused a 24.5% nosedive of stock prices. In 2005, the Iraq Crisis occurred and terrorist threats persisted. In 2008, the US sub-prime mortgage crisis developed into a worldwide financial storm.

Alough the crisis this time was caused by the high default rate of sub-prime borrowers, yet the article thinks it should be classified as banking crisis since it caused the banks' clean asset became "toxic".

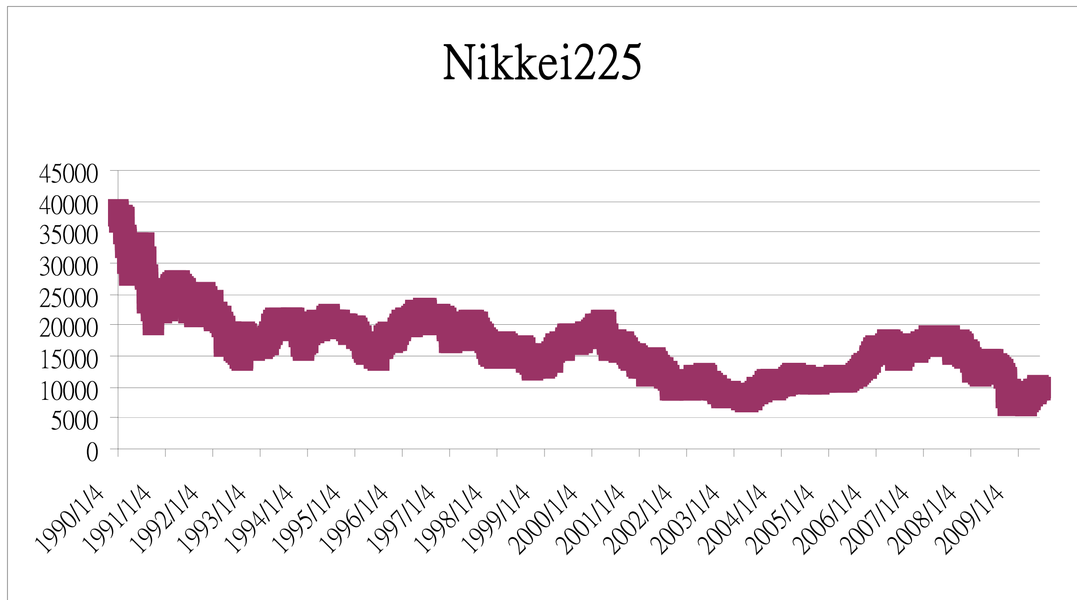
4. Past crises model

In past crises, the article thinks the Japanese recession model since 1990 seems to be the most likely model that this Sub-prime crisis will follow.

The introduction of Japanese recession since 1990: Yoshinori Shimizu (2007) September 15 2006, In the late 1980s, Japanese banks enjoyed a great international presence monopolizing of the nine largest banks in the world in terms of theirs assets sizes. Unlike other American or European banks, these Japanese banks' capital included some unrealized gains from Japanese corporate stocks obtained at earlier time and lower cost. When the stock index started its downtrend at 1990 (Fig. 6) and the BIS regulation on banking capital requirement went into force at the end of March 1993 at Japan. These big Japanese banks had capital inadequate problems when the stocks they once owned reduced their market value and, hence, banks' capital became inadequate. The BIS is an international standard indicator for testing if bank's capital is enough to support its business. If BIS of each bank is under 8%, it means this bank has higher leverage than other banks and its counter party would charge a higher risk premium when doing trade with this bank, which is regarded as more risky. There are several ways to build up the BIS which are: (1) increase banks' capital by issuing more equity (2) increase banks' debt by issuing subordinate debts (3) reduce banks' assets especially loans. At Japan's experience, the bankers choose a immediate and practical way by reducing its assets which mostly were the commercial loans due to its volume and short duration. This action also led the Japanese firms a sign that the banks were not able to create more loans to support the original development projects. According to Minsky's fragility theory, the projects went from speculative stage to Ponzi finance at such short time. These Japanese businessmen had no choice but to revise the investment projects. The negative impact would lower the Japan future demand for loan. It took a long time to recover the confidence or the economic future growth. According to Yoshinori Shimizu (2006), this is the major reason for Japan's

recession after the burst of the bubbles during 1990 “the lost decade”.

Figure 6. Japanese Stock Index: Nikkei225



Source: Bloomberg

There are many similarities between Japanese lost decade crisis and US Sub-prime crisis. The most common situation is that the big banks at two nations have to deleveage their assets in short time to make up capital shortage. At the deleverage stage, these banks did not only sell the old assets but also constrain their assets growth. Selling old assets means a deflation is under way since any rebound of asset price might meet the severe selling pressure from the financial institutions. Constraining assets growth means the enterprises at will have difficulty in getting loan from banks. The CDS of both high credit and high yield company names both at soars since US government stood aside when Lehman Brothers file chapter 11(See Fig5). In such case, both banking and corporate bond issuance from US will not be popular with the domestic and international investors since once credit rating A and the fourth big investment bank would file bankruptcy suddenly. This is like Minsky’s Ponzi financing moment. In the Ponzi financing scheme, the owners of the durable goods will have to issue many debts to meet its cash shortage. This leads to pyramid Ponzi scheme. When no one wants to loan to the assets owners, the pyramid Ponzi scheme collapsed and the stage will go to Minsky moment. Up to now, all the big economic governments have pumped billion of cash into the markets and lower the interest rate to historically low trying to end the unexpected recession. The article think the loosen environment will help to avoid the situation to become worse since it reduces the borrowing cost of enterprises and add the liquidity among banks. But with Japan

experience, we know a low capital financial environment would lowed the growth of money supply and confidence for the future economic which this article thinks will also happens in US at this sub-prime crisis.

Conclusion:

There are so many similarities between US sub-prime crisis and Japanese lost decade crisis both resulting from the capital insufficient of financial institutions. In such case, this article thinks the process of the US sub-prime crisis will follow the Japanese last decade pattern and the period of time will last longer than expected.

References

Ackermann, J., The subprime crisis and its consequences. J. Finan. Stabil. (2008), doi:10.1016/j.jfs.2008.09.002.

Justin Huang, 2008, A Recap of Recent Financial Turmoil. Strictly Private and Confidential, Oct. 20,2008.

JPMorgan, 2008, *Great financial crisis views of history,* GL-2008-37.

Morgan Stanley Research, 2009, US Portfolio Strategy : *The Crowd: Examining the Consensus Calls,* February 1, 2009.

Nomura, 2009. *The Credit Crisis Explained*, Quantitative Strategies-Fixed Income Research, January, 2009

Praet, P., Nguyen, G., Overview of recent policy initiatives in response to the crisis. J. Finan. Stabil, 2008. doi:10.1016/j.jfs.2008.09.008.

Philipp, M., Hildebrand, 2008.The sub-prime crisis: A central banker's perspective. Journal of Financial Stability 4 ,313 – 320.

Nomura International, 2009, *The Credit Crisis Explained.* Quantitative.

Yoshinori Shimizu 2007. Impacts of the BIS regulation on the Japanese economy. Jouroal of Asiao Ecooomics 18 (2007) 42-62.

Investopedia Partners**:** http://www.investopedia.com/terms/l/level3_assets.asp

Thomas Tan. Introduction to Minsky Theory-Stability Is Destabilizing , posted Wednesday, 7 May 2008. Thomast2@optonline.net

Investopedia a Forbes digital company http://www.investopedia.com/terms/c/cdo.asp

Investopedia a Forbes digital company http://www.investorwords.com/930/Collateralized_Bond_Obligation