A new perspective on causes of the global financial crisis

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Abstract

The factors that have been widely known until now are not the root cause of the financial crisis in 2008 but the phenomena that appeared in the developing course of it. There is a fundamental cause apart from them. It is the pledge of 'Ownership Society' that Bush candidate proclaimed in the 2000 presidential election. After win of the election, he enacted the policy of supplying 5.5 million homes to homeless people. The role of financial derivatives was important for its funding and the rise in housing prices was essential for the demand.

However the housing prices reversed to decline since 2007, which caused the prices of financial derivatives to plummet. So the financial companies which were involved in the derivatives went into a crisis of bankruptcy. The principle of credit destruction, which is a reversed process of credit creation, thereupon operated. At last the whole financial institutions were on the brink of collapse.

This paper reveals not only its real cause but also its developing process that led to the global crisis, and then it might be dawned why economic difficulties were followed inevitably. The way, that would have minimized the economic damages caused by the financial crisis in 2008, is also discussed in this paper in order to find effective countermeasures against various economic crises that may arise in the future. And the responsibility for the crisis is also clarified in order to prevent the national economy from promoting a sweet political promise such as 'Ownership Society'.

1. Introduction

It is as important as anything else to know what caused the financial crisis in the late 2008 and how it was developed since it is indispensable to prevent such a tragedy from occurring again in the future. And it is essential for the successful management of a company too. In reality, Lehman Brothers, which was appraised in the past as one of the best companies by some experts in the business management, went bankrupt in the late 2008 when the crisis happened. However it is not easy to find it exactly even though it is very important as above when a cause takes long period of time to result in a disaster. The financial crisis in 2008 is one such representative example. Indeed, all of the factors that have been raised as the cause of the crisis so far are not fundamental because negative cases can be suggested easily for them. It is rather reasonable to assume that they are the phenomena which occurred during the developing process of the financial crisis. We investigate the fact that reveals not only the real cause of it but also elucidates its process which led to the global crisis in this paper.

If any policy prescription would be made for the similar crisis in the future based on wrong understanding of its cause, the result would be worse than ever. So it is important to know the exact cause of the crisis, especially, in order for the government to prepare a proper policy against it. Above all, identification of the exact cause of it would not only open up a path to prevent such a tragedy from happening again in the future but also would help us to anticipate how the process would take place and what the ending would be. Then it would be easy to prepare a proper policy which will reduce the depth and duration of economic recession caused by the crisis. To our thought, such an exact analysis has not been achieved at all as to the crisis in 2008 till now. If the exact cause is not clarified as above, such a tragedy would be rarely prevented from occurring again in the future.

More importantly, the relatively successful accomplishment of overcoming it has not been assessed properly. If a successful policy is not assessed enough, it is likely for the government to adopt a wrong policy which results in failure when a similar crisis occurs in advance again. In the world, the road to success is unique or narrow, but the road to failure is wide and spreads all over. If any policy to fail would be selected in the future, a tragic accident such as the Great Depression would happen in the economy and the period of economic recession would be prolonged.

2. What have been pointed out as causes of the crisis?

Economic experts have suggested many factors that seemed to cause the crisis. Among them, it has been argued that the crisis was a product of the neoliberal policy which relaxed the financial regulation. In particular, the claims that high investment leverage of financial companies, which was exploded by the easing policy of legal and institutional regulations on financial instruments, called for the crisis have been accepted as truth. Other claims that the national debt or the development of the financial market was the cause of the crisis have been seemed truth too.

All the above factors are appealing since they appeared before the crisis broke out. But all that preceded the crisis is not a cause of it. If it is wrong to understand the exact cause, it is almost impossible to capture the progressing process of the crisis and to reduce its damages and adverse effects of the post, needless to talk about preventing a similar crisis from occurring in the future. It is so important and essential to identify accurately the causes of all economic crises including a financial crisis.

At first, each of the above-mentioned factors is reviewed by this paper whether it is the real cause of the crisis or not. To put it plainly, the reason why each of them was not the real cause but fake one is checked and then it is clarified what was its real and root cause in this paper. It is discussed also in this paper how it has led to such a serious disaster as we have experienced recently.

2.1. Was it real that financial derivatives, high leverage of investment, and neo-liberalism caused the financial crisis?

The most well known cause of the global financial crisis in 2008 claimed by some experts was the financial deregulation about financial derivatives, excessively high investment ratios, and so on. However, the book 'Rethinking the Great Depression' written by Gene Smiley in 2002 contradicts vigorously the claim as follows.

"The Great Depression is often said to demonstrate the instability of the market economies and the need for government oversight and direction. The evidence can no longer support such assumptions. Government efforts to control and direct the gold standard for national purposes brought on the depression. Once it began, government actions, particularly in the United States, caused it to be much longer and much more severe. When the contraction finally ended, government interference in U.S. markets made the recovery unbearably slow and in 1937~1938 brought on a 'depression within a depression'. The 1930s economic crisis is tragic testimony to government interference in market economies."(Smiley, Preface x, 2002)

The government should be more competent than the market function in order to prevent economic crises or to lessen the damages through strengthening its regulation on the financial market. But it is rarely expected. Rather, it is common for the government to shorten the market function and to make the economy worse by reversing it. The same was true of the financial crisis in 2008.

In reality, the financial derivatives were not a fundamental cause of the crisis because the variable that followed could not be the cause. The crash risk of the derivatives related to home loans, especially CDS(Credit Default Swap), became serious after the crisis of housing loans happened. It was a financial product similar to the 'Portfolio Insurance' in the late 1980s, but it was hard to find any economist claiming that it caused the shock of stock market on October 1987 and the subsequent recession in the economy.

It was true that the CDO(Collateralized Debt Obligation), a kind of financial derivatives that securitized debts, increased the demand for housing and raised the prices of real estate by providing additional funds to mortgage loans, but it was just a security for dispersing the debt risk. From scientific standpoint, they were not a root cause of the financial crisis even though it was true that mass production of them deepened and widened the crisis. The claim that financial derivatives caused the crisis revealed a logical contradiction on its own, because financial crises had occurred intermittently in the days when the derivatives had not been developed so much. For instance, the US economy had suffered the crisis several times even in the recent history such as the early 1970s, the early 1980s, the late 1980s, the late 1990s, and the early 2000s.

In the economy, financial derivatives have functioned as quasi-moneys with creating credits which have contributed to a stable growth of the economy. Therefore, if the derivatives are considered as a fundamental and decisive cause of the financial crisis, any extreme regulation on them would be justified and the development of financial market would be suppressed. Then it would hinder the stable growth of the economy by suppressing the credit creation.

Even though a variable such as economic growth or money has good function in the economy, it is necessary to manage it politically in order to stabilize the national economy and the financial market because it may cause a severe crisis when it increases excessively. At least, the plunge of its price or its rate which often causes a collapse of the market should be prevented beforehand. Thus the proposal to trade the derivatives in open markets is desirable. However, it is necessary to prepare a preventive measure from hindering the development of new financial products.

Next, it was likely that the high leverage of investment banks caused the crisis. But it was not a root cause of the crisis since there was an opposite case. The investment ratio of LTCM(Long Term Capital Management), which broke down in 1998, was much higher than the leverage ratios of bankrupt companies in 2008. LTCM borrowed 125 billion dollars based on its capital with just 5 billion dollars, investing 1,250 billion dollars worth of financial products, making the leverage be 250 times(Greenspan, pp 193, 2007). However, its bankruptcy did not cause a serious crisis such as the crisis in 2008.

The more decisive opposition can be found in the futures trading at the commodity exchange market, trading in petroleum, grains, industrial resources, and so on. It is noticeable that it has not caused a financial crisis even though the ratio in the futures trading market is very high. Rather, the high investment ratio has contributed to long-term stabilization of the commodity market by reducing a sudden price fluctuation and by causing frequent but low price fluctuations. Therefore, the high investment ratio was not a root cause of the financial crisis.

Third, the argument that deregulation or neoliberal economic policy called for the financial crisis is also a logical error because the countries that have not pursued neoliberal economic policies have experienced the crisis several times. Even in the recent history, such cases are easily found. The crisis experienced by Finland and Sweden in the early 1990s is the representative example. These two countries suffered a severe crisis despite steadfast policies far from the neo-liberalism. This fact disproves that the crisis in 2008 was not caused by the neo-liberalism. Particularly noteworthy is the fact that the financial crisis has been overcome much more successfully than others when the neoliberal policy has been firmly established.

2.2. Did national debt cause the financial crisis?

The claim that national debt caused the crisis was appealing as strong as any others since the countries which experienced seriously the financial crisis were likely to get high ratio of national debt to their GDP. This claim is deep in history. In 1930s, early in the Great Depression, Irving Fisher raised the notion of debt deflation. In short, excessive debt called for shortage of demand, which led to prices decline and economic downturn resulting in an economic depression. This claim is persuasive in ideality but it is not useful in reality because his argument has been rejected by the history. For example, the US debt-to-GDP ratio was around 30 percent until the 1970s and it increased continually to exceed 70 percent in the 1980s, but the economy did not go down like the Great Depression. In 2010, Kenneth Rogoff and Carmen Reinhart published a book titled 'This Time is Different: eight centuries of financial folly' studying the national debt defaults in the economic history. Their arguments that national debt played a key role in the crisis has been persuasive since the US sub-prime mortgage crisis quickly developed into a severe financial crisis and it spread quickly to other countries which kept large debt ratios.

So is the debt really a root cause of the financial crisis? Even though a country with a high debt ratio is vulnerable to the financial crisis, it is hard to consider it as a root cause of the crisis because the reality rejects it. According to a IMF's report on the national debt-to-GDP ratio on November 2009, it accounted 84.8 percent for the US economy and 218.6 percent for the Japanese economy. Why did the financial crisis happen in the US economy which kept a much lower debt ratio than the Japanese economy? If the debt was a root cause of the financial crisis, it should have occurred in Japan first, not in

US. Therefore, it is hard to see that debt was its root cause.

Above all, the government has to raise its debt ratio significantly in order to get out of the financial crisis. Large amount of public fund should be invested in order to stabilize the financial system and fiscal spending should be increased significantly in order to escape severe economic downturn. Then the national debt should be getting bigger and bigger. If the debt is considered to be a root cause of the crisis, it is likely that the crisis becomes more serious since the above prescriptions cannot be enacted.

2.3. Did the development of financial market deepen the crisis?

Kindleberger and Alliver claimed at the foreword of 'Manias, Panics, and Crashes; The History of the Financial Crises' that the development of financial market deepened the financial crisis as follows. "The years since the early 1970s are unprecedented in terms of volatility in the prices of commodities, currencies, real estate and stocks, and the frequency and severity of financial crises."(Kindleberger & Aliber, pp 1, 2005) "Despite the lack of perfect comparability across different time periods, the conclusion is unmistakable that financial failure has been more extensive and pervasive in the last thirty years than in any previous year."(Kindleberger & Aliber, pp 7, 2005) In short, they argued that the development of financial market caused frequently the crisis.

However, it is an erroneous analysis stemming from a lack of understanding about a pathological phenomenon. It is just like to assert that the humanity is getting more and more often a disease nowadays and its cause is the development of civilization. However, with the development of civilization, the treatments on diseases have become easier and more effective than the past and the life span of mankind has been getting longer. It is same to claim that the 'division of labor' has played a role in separating the supply and the demand and thus it causes a recession which occurs when the latter becomes insufficient compared with the former. And it is equal to claim that the financial crisis is due to the development of stock market since it has caused not only the expansion of the stock market but also the collapse of its bubble.

Their claim is very dangerous because the logic may develop into the direction of destroying the division of labor and dismantling the stock market. It is reasonable to assume that the financial crisis is only a pathological symptom since the division of labor and the development of stock market have made a great contribution to economic development. It could not be claimed to eliminate the immune system of human body even if the hypersensitivity of human body's immune function causes a disease occasionally or exacerbates it. As healthy a person gets sick, the economy is occasionally exposed to a disease, no matter how strong the economy is.

Of course, it is necessary to manage the pace of deregulation or liberalization so that it can be sustainable. No matter how positive are economic variables such as economic growth and money, losing their sustainability often leads to a big catastrophe. It is also essential that the development of financial derivatives should be adjusted within a sustainable range such as the growth rate and money in the economy. So what is the real cause of the financial crisis in 2008?

3. A root cause and developing process of it

What caused the financial crisis in 2008 which put the economy into a wholly upset? As well known, it was caused by the collapse of sub-prime mortgages. So what happened to the sub-prime mortgage crisis? It is very important to understand the root cause precisely so that we can correctly understand the process of its development and the result. Especially it is very important for preparing a proper prescription of the government. And it is also important for a company to overcome properly the crisis. So what is the root cause of sub-prime mortgage crisis? The cause cannot be happen after the crisis. What appears before the crisis and its developing process? The factor that happens first is the real root cause. So what happened first?

The Bush administration, launched in 2000, pledged to provide 5.5 million houses to homeless people based on the election slogan of 'Ownership Society'. In order for the new 5.5 million houses to be sold smoothly, various political supports were necessary. And the rise in housing prices is also essential in order to attract the attentions of homeless people. In the end, the housing industry was overheated and some housing prices became more than doubled in his regime. Such a surge in the prices eventually created a bubble and its collapse brought about the financial crisis.

A similar case to the US economy had happened already in the UK economy. In the mid-1980s, the Thatcher administration provided 1.5 million houses mainly to homeless people. In 1984, the 'Housing and Building Control Act' was enacted for the policy and, in 1988, the 'Housing Act' was enacted to promote the sale of public housing. Its government cut the housing price by up to 60 percent and supported its financing lavishly. The supply of new houses also increased dramatically. So the rate of home ownership rose to 65 percent in 1988 from 56 percent in 1979. As a result, the housing prices rose sharply overall but this rising prices were not sustainable. The prices fell since 1989 and the bubble burst in 1990. In the end, a financial crisis broke out and the UK economy suffered a severe difficulties for three years, with negative growths for two years as the below table 1 shows.

It is marvelous that this historical fact was ignored by the economic experts in US and they did not pointed out the problem of Bush's electoral pledge of 'Ownership Society'. It might be caused by the reason that the economics they have learned is rarely useful in reality, not because that they are incompetent. To our thoughts, the economics is hardly capable of even reading the reality.
(Source; International Financial Statistics 1999, IMF)

year	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
rate	3.7	2.3	3.8	4.3	4.8	5.0	2.2	0.4	-2.0	-0.5	2.3

Table 1. Growth Rate(%) of UK from 1983 to 1993

One other economic variable made the US crisis worsen. It was the sharp increase in fiscal spending due to the tax cut and the war in Iraq, which aggravated the fiscal balance. Its deficit continued to rise, reaching about 800 billion dollars in 2006 which was about 6 percent of GDP. The government could not help to issue bonds so much that the interest rates rose rapidly. Of course, the rising interest rates were not a root cause of the crisis since there were many cases where they did not cause a financial crisis. So it is correct to say that the policy of supplying homes to the homeless at a large scale caused the crisis. The rise in interest rates played the role of a blast to it.

Until the mid-2000s, the interest rates in the US market remained relatively low since China and Japan, which had recorded a large-scale surplus in the balance of international payment, had bought US treasuries. But the deficit of US current account skyrocketed to about 800 billion dollars in 2006 and the situation changed abruptly. The value of dollar turned to be weak as the dollar supply became excessive. If the dollar continued to depreciate, the countries that bought US treasuries would have faced losses. So it became difficult increasingly for foreign capitals to buy sufficiently them and the interest rates in US rose sharply.

The interest rate of federal treasury bond for three months rose already to 4 percent in 2005 and to 5 percent in 2006 from 2 percent in 2004. The low-income earners who had paid the interests on mortgage loans were in serious trouble, which raised market interest rates further. As market interest rates surged, the prices of sub-prime mortgages began to fall quickly and the prices of financial derivatives that included them fell sharply. The burdens of financial institutions that invested much in financial derivatives deteriorated rapidly. At last some financial companies began to collapse causing credit destruction. The US financial crisis in 2008 went on this way. Its crisis spread to the countries with weak economy, especially the countries with large deficit of international payment or with large amount of fiscal debt, and the countries of which banks invested too much in US financial derivatives.

In short, 'Ownership Society' is the root cause of the global financial crisis. Is it real? There are two ways to find the root cause. One way, as seen so far, is to find the variable at first that has changed significantly. This way is also powerful to find the root cause of a crisis, since there exists certainly a variable that has changed significantly. But it is not easy to find the root cause in this way because there are many variables in the economy. So it is much more useful than the above way to trace backward the past process that has developed the crisis. Just as there are induction and deduction methods in the logic, there are two ways of finding the cause. Since the cause of the crisis is found in the former way till now, it is also necessary that the latter way is reviewed in order to check its root cause.

Why did the global crisis happen in 2009? It was caused by the spreading of US financial crisis to some countries. So why did the US financial crisis happen? It is a common analysis that it was occurred by the bankruptcy of Lehman Brothers in the late 2008. So why did it go bankrupt? It is the analysis of this paper that the deposit withdrawal from Bear Stearns operated the economic principle of credit destruction, that is, the reverse process of credit creation. So why did the deposit withdrawal from Bear Stearns happen? It was because two hedge funds, subsidiaries of Bear Stearns, broke down after losing 1.6 billion dollars of customers' money in mid-2007, raising worries about the business performance of Bear Stearns. Why did they went broken down? It was because their business balances had deteriorated due to the price fall of financial derivatives they invested. So why did their prices fall?

There were two reasons for the price fall. One was that the repayment burden of mortgage loans grew to such an extent that it was hard to be afforded. Especially, the repayment burden of the poor was increased very much. The other one was that housing prices fell. The decline in housing prices meant that it was no longer necessary for the poor to hold house with the repayment burden of its loan. It is needed to track these two causes back in time.

First, what was the reason why the burden on the poor increased? It was because the interest rate surged. Why did the interest rate soar? There were several causes, but the most critical was the excessive issuance of the federal bond. The interest rate rose sharply due to the excessive supply of the federal bond and its price falling. As already mentioned, the interest rate of a federal bond soared to 5 percent in 2008 from 2 percent in 2004. So why did the supply of federal bond become excessive? It was because the budget deficit in 2006 was about 800 billion dollars. Why did the deficit so suddenly rise? It was because tax revenues did not increase enough due to the tax cuts while fiscal spending increased significantly due to the Iraqi war. One of the fundamental causes of the US financial crisis was thus found.

Next, why did housing prices fall rapidly? The reason for it was that the housing prices had soared to form a bubble. So why did the housing prices soar? Many people were so busy to buy houses. Why? The Bush administration had enforced the policy to provide 5.5 million houses to the homeless, political supports were needed eventually in order for such a large number of houses to be sold well, Fannie Mae and Freddie Mac played important roles for its funding, and then anyone could borrowed the almost amount of the purchase fund. It was even more essential that housing prices continued to rise, which would encouraged the homeless to purchase a house. And the continuous rise of housing prices caused the future demand to shift into the current demand for the gains of rising prices. Actually, the homeless was able to make a large amount of loan enough to buy a house without paying his own money when the housing prices rose rapidly.

However, the soaring prices could not be sustained since the time, when the demand was shifted, would come someday and then the demand would be vacant. And the poor could pay back the loan interest only when its rate was low, so the sustainability of the rising price became lower and lower because the burden of mortgage repayment got bigger and bigger. When the burden increased after the interest rates rose, the sub-prime mortgages became fragile and then the housing prices turned to sharp decline. In the end, the prices of sub-prime mortgages and relevant financial derivatives plummeted as housing prices turned downward. The value plunge of the derivatives caused many hedge funds as well as some banks to collapse, triggering the financial crisis by operating the credit destruction principle.

4. Was there any way to minimize the impact?

The crisis in 2008 might not happen if the political promise to supply 5.5 million homes for the homeless was not made and its impact was not so serious if the fiscal deficit was not increased so much. Even though the crisis was unavoidable, it would have been possible to reduce the blow of it if appropriate policy measures had been taken in time. Historically there were some cases which prevented further development of the crisis by blocking the operation of the credit destruction principle. The following instance is representative one.

As Kindleberger and Aliber wrote in their above book; "The implosion of the bubble in U.S. stock prices in 2000 led to declines in stock prices for the next several years but the ensuing recession in 2001 was brief and shadow."(Kindleberger & Aliber, pp 5, 2005) What policy made such an exceptional achievement at that time? The autobiography of Greenspan, the ex- chairman of the Fed, showed the successful policy as below.

In 2001, the US economy was in a serious situation where the collapse of the NASDAQ market could trigger a financial crisis. Early January 2001, the FOMC cut the fed funds rate by half a percent point to 6 percent. It was an unusual measure, since it had been common to cut by 0.25 percent. At the end of January, the interest rate was cut additionally, but the dangerous economy did not settle. So, on March, April, May, and June, the FOMC continued to lower the interest rate to 3.75 percent.(Greenspan, pp 212~213, 2007)

The economic situation, which had just been calmed down slowly, broke into the unpredictable situation in 2001 by the September, the Afghanistan war, and so on. With this uncertainty growing, the Fed cut federal fund rate four more times. At the end of 2001, accounting scandals of Enron and WorldCom happened, worsening the economic situation further. Especially, the bankruptcy of WorldCom at 107 billion dollars in assets was the biggest in history. Finally, the FOMC lowered the interest rate to 1.25 percent on October 2002. This was a very low level that could not have been imagined ten years ago at that time.(Greenspan, pp 228, 2007) These preemptive cuts of the interest rate blocked the operation of the credit destruction principle.

On the other hand, there are far more examples in the world history that caused a tragic situation by neglecting the operation of credit destruction principle. The Great Depression in the 1930s is one such representative example. Bankruptcies of banks were on the verge of a financial crisis in the early 1930s, but no proper policy measure was taken. In recent years, there happened a financial crisis in 2008 in the US economy. If the economic principle of credit destruction was understood well, it might be possible to prevent the crisis in 2008 or to weaken its economic damage and to prevent its worldwide spread. In fact, there were such cases in history.

One of them is the case of 'Black Monday' on October 19, 1987. The Dow fell 508 points at the day. The rate of daily drop was 22 percent, marking record high. It was twice as high as the fall on October 24, 1929 which was called as 'Black Thursday' causing the Great Depression. The shock was so great that leading newspapers in US reported at that time as follows. 'There is no question that this is the worst economic time since the Great Depression.' 'Sluggish economic growth this year will cap the worst three-year period centered on a recession since the Great Depression.' 'The banking industry has plunged to its lowest point since the Great Depression.' 'The worst retail sales period on record since the Great Depression.' 'This recession is hitting white-color workers more heavily than any since the Great Depression of 1930s.' 'Forecasts for a weak recovery suggest the period [ahead] will be the worst for the economy since the Great Depression.'(Kaletsky, pp 107, 2011) It can be easily guessed how big the shock was as one leading weekly magazine had posted the title 'Again 1929?'

The Fed Chairman Greenspan at that time canceled a Dallas schedule and returned to Washington instantly. He discussed about the situation with his advisory group and made a deliberate decision. An hour before the stock market opened the next day, he made a short speech that 'The Fed qua US central bank is ready to supply liquidity to stabilize the economy and financial markets.' In line with this speech, the Federal Reserve Bank of New York provided promptly as much liquidity as needed in the stock market. This immediate response stabilized the financial market. Furthermore, the Dow, which had fallen to 1,738 at that time, reached 14,000 in 2006 after overcoming the sharp decline in 2001 and the US economy enjoyed a long prosperity just before the financial crisis in 2008.

The economic difficulties after 2008 could have been avoided or alleviated if a proper policy was implemented preemptively when the stock prices of investment banks fell rapidly. It should have enforced an aggressive monetary-easing policy on November 2007 when the big losses in the business balances of Merrill Lynch, Citigroup, and AIG were exposed. At the time, "Merrill wrote off a staggering $8.4 billion - fully 22 percent of the company's net worth."(Lowenstein, pp 109, 2010) "Similar tensions were brewing at Citigroup. Two months earlier, it had claimed to be immune the subprime virus; now it admitted it would have to write down $8 billion to $11 billion in mortgage securities and corporate loans in the fourth quarter - in addition to a $6 billion charge for the third."(ibid., pp 110, 2010) AIG was asked for additional collaterals from Goldman Sachs, Merrill Lynch, and Societe Generale(Lowenstein, pp 112, 2010). In this situation, it was right for the government to assume that the credit destruction principle started to work.

The Fed lowered the interest rate on September 2007 and the financial market seemed to be stabilized on early October as the Dow exceeded 14,000. Accordingly the worry about financial crisis became rather dull and the policy response was insufficient. Despite the Fed's cut of its interest rate, the prices of financial derivatives continued to decline and the balance of financial institutions deteriorated rapidly. Citigroup and Merrill Lynch fired their CEOs and expanded their capitals. The Fed cut its interest rate two more times as the financial market was not stabilized. The Fed cut its interest rate by 0.75 percent on January 2008 once more, but its move was too late and defensive. It was needed to take a preemptive and aggressive action to calm down the fast-paced financial crisis. In this situation where credit destruction is under way, a policy to supply the liquidity directly into the financial market had to be implemented by the Federal Reserve Banks.

Even if the opportunity to stabilize the financial market was missed at that time, the collapse of Bear Stearns on April 2008 should have been prevented any means. And then it would have been possible to mitigate the impact of the financial crisis by cutting off the further operation of the credit destruction principle. Unfortunately, it did not stop and the market became worse and worse. On early July, IndyMac Bank, a big mortgage lender, went bankrupt. Two months later, there appeared another serious accident, which triggered the crisis in earnest. It was the bankruptcy of Lehman Brothers, fourth-ranked US investment bank, on September 14th. This accident accelerated the credit destruction.

On September 15, Merrill Lynch, which was third in US investment bank and belonged to a top-tier group, was acquired by BOA and Morgan Stanley, the second largest US investment bank, was in a liquidity crisis and acquired by JP Morgan. On September 16, AIG, the world's number one insurance company, received 85 billion dollars from the public fund and on October 8 it received 37.8 billion dollars in addition. And banks such as Washington Mutual and Wachovia collapsed. Citigroup, a very large commercial bank, received the public fund too. Confronting the collapse risk of the whole financial system, the US government announced the plan to spend a large public fund of 700 billion dollars which could hardly be imagined in that summer. The amount spent actually was about 400 billion dollars. And the US Treasury spent more than 800 billion dollars on fiscal spending in order to prevent operating of the vicious cycle which might be caused by the dysfunction of economy..

What would have happened if Bear Stearns recognized its serious situation and received immediately co-financing from other financial institutions on March 10 when the withdrawal of investment fund occurred first? What would have happened if the Fed announced that it would put 30 billion dollars directly into Bear Stearns, not to JP Morgan? What would have happened if Lehman Brothers had been relieved by declaring that the Fed would preemptively invest half of the 700 billion dollars from the public fund into it? If the principle of credit destruction was known well to economic experts widely, the policy makers would have done so and could have prevented the economy from falling into such a serious crisis as in 2009. Indeed, a decade ago, there was a case in which a serious crisis was overcome without a severe blow to the economy.

When LTCM was in bankruptcy crisis on September 1998, the US economy was in great danger of falling into a swamp of financial crisis. Just before it, Russia declared moratorium on its international payment, so the occurring possibility of a financial crisis was as high as ever. As mentioned already, LTCM borrowed 125 billion dollars relying on 5 billion dollars in capital and operated 1.25 trillion dollars of investing in financial derivatives. If left untreated, it would have developed into a very severe crisis. Faced with this crisis, Bill McDonough, Governor of the Federal Reserve Bank of New York at that time, called top executives of the 16 most influential banks in the world and asked them to solve the problem of LTCM together. Finally, they decided to put 3.5 billion dollars into LTCM after tense and long negotiations.(Greenspan, pp 194, 2007) As a result, LTCM's capital of 5 billion dollars disappeared as smoke, but the above banks collected their inputs. In addition, investment losses of LTCM did not affect significantly the financial market and the economy. Foremost, it is very important that the operating of the credit destruction was blocked.

Deposit withdrawal of a financial company is as dangerous as the collapse of stock market. Economic experts usually have likened it to 'shouting fire' in a dark theater where a movie is playing. The deposit withdrawal of a bank is dangerous as above. So the Fed and the Treasury Department should have responded immediately when Bear Stearns confronted with deposit withdrawal. If so, there would have been no collapse of Lehman Brothers, Merrill Lynch, AIG, etc., and no input of the massive public fund so much. Looking back, it is a real pity.

Why did not the US policy authorities respond timely to the collapse of Bear Sterns? First, they did not understand certainly the economic principle of credit destruction. Economists were not different from them. Rather, some influential economists blamed vigorously the decision of the Fed to support JP Morgan for 30 billion dollars on April 2008 in order to stem the bankruptcy of Bear Stearns. For instance, Joseph Stiglitz, who won the Nobel Prize in economics in 2001, condemned the policy that the Fed rescued Bear Stearns. It was his claim that the bank, which was a main culprit of the turmoil in 2008, was rescued irrationally and ambiguously without any consideration to relieve the poor house holders.

When the Congress voted to rescue Freddie Mac and Penny Mae on July 30, 2008, Robert Rodriguez, a fund manager who was famous as warned the crisis in advance, criticized that the financial and social system was going to drive the descendants into financial poverty. And a republican senator at that time, Jim Burning, blamed that socialism was being realized in US. However the junk mortgages invested by these two institutions were estimated over 1 trillion dollars. If one of them collapsed, all the financial system would have been at risk of collapse. Moreover, the dollar was even more likely to lose its position as an international key currency if foreign investors such as China and Japan, which had believed in government guarantee for the companies, left the US market with disappointment. If it would have happened actually, the US economy would have fallen into a swamp of economic hardship that would be hard to recover.

The above blames got Paulson, who was to be sensitive to the public opinion, try to avoid the injection of public fund to Lehman Brothers, which caused decisively the financial crisis. If the economic principle of credit destruction would have been understood by the economic experts, it would have been easy for them to realize the fact that the collapse of a large financial company would lead to a severe crisis by operating the principle, collapsing the whole financial institution. And then they would have urged the Fed to take appropriate actions.

In reality, the operation of the credit destruction principle stopped after the US monetary base was doubled at the end of 2008 from the previous year. This rapid rate of money increase would have been sufficient to bring about a surge in inflation at a normal situation, but it did not occur since the economic downturn reduced the circulating speed of money, the credit multiplier, and the currency function of quasi-moneys. It also contributed to the price stability that the volume of financial derivatives was decreased dramatically by their price falling.

It would have happened that dollar lost the position of an international reserve currency as the supply of dollar became excessive resulting in its value decrease, but this risk also disappeared due to the surge of dollar demand in the countries that were exposed to the currency crisis and forced to increase their foreign exchange reserves. However, if the economy would recover in earnest, the monetary policy should be tightened to prevent the value decrease of dollar, which is the reason why the exit strategy of the quantitative easing policy has begun to be sought since 2012.

To summarize, the US financial crisis in 2008 was the worst since the Great Depression as results of Bush's recklessness, Paulson's sensitivity to the public opinion, and Bernanke's passive response. At first, Bush made a reckless promise to supply 5.5 million homes to the homeless. Next, Paulson was flustered to rescue some financial companies and to neglect others, especially to leave Lehman Brothers bankrupt. And Bernanke turned away his face from the operation of the credit destruction principle, which resulted in long-term economic difficulties worldwide.

5. Why is it difficult to prevent a financial crisis?

What is the nature of a financial crisis? The crisis is a serious disease of the economy. As a healthy person gets sick occasionally, a healthy economy undergoes a financial crisis occasionally. In fact, most countries has already undergone the financial crisis several times. Even the countries that get strong competitiveness and growth potential have experienced financial crises too. For an instance, the crisis occurred in Japan in the late 1980s while the slogan to learn Japan was flared worldwide.

Why does the financial crisis, a serious disease of the economy, burst intermittently? Unlike a human disease, its cause and process is relatively simple. World history has showed that most of financial crises have occurred in two cases as follows. First, it has occurred when the real estate market or the stocks market is overheated to make bubble which collapses soon. Next, it has occurred when the economy is overheated to worsen the balance of international payment which causes a currency crisis.

Is it easy to capture and prevent the financial crisis if its cause and process is simple as above? If it can be grasped or prevented easily, it is not needed to call the financial crisis as an economic disease. Above all, it is very difficult to judge which level is overheated and which level is bubble. Therefore, it might be right to say that preventing financial crisis in advance would be harder than anything else. The key might be how quickly we would find out it and how quickly we would prescribe against it.

The global crisis of 2008 was in a situation where the economic sickness was very serious and the prescription was too late. Fortunately, the economic disease was recovered by prompt countermeasures of the government after a relatively short distress of the economy. However, it passed through twists and turns too relying on what policy was enforced. For instance, the EU succeeded in blocking the operation of credit destruction principle by increasing its monetary base by 37 percent in 2008. This policy contributed to the economic recoveries of Poland, Hungary, Ireland, Iceland, and Latvia which experienced a serious crisis in the end of 2008. After then it implemented an austerity policy in the second half of 2009 to cut the increasing rate of its monetary base by minus 0.9 percent in order to prevent inflation, which resulted in deepening of the crisis by resuming the operation of credit destruction principle. And then the economy was worsened. Especially the countries such as Greece and Spain, whose balances of international payments recorded large deficits, experienced serious difficulties. On the contrary, the US government blocked the further operation of credit destruction principle through increasing its monetary base by more than 20 percent in 2009 just after doubling it in 2008, thereby it prevented the economic hardship from becoming more serious than it was in reality.

6. Discussions and a conclusion

If the cause of a crisis is temporally distant from its result like the recent crisis, it is difficult to grasp the causal relationship between them and the cause is hardly believable even if it is captured. However, the crisis has to be judged as a chronic disease of which cure is very difficult since it is the result of a long-term developing process. Therefore, it is inevitable to pay attentions to the developing process of the cause which takes a long period of time to reach the result.

To ensure and conclude, let's check again the root cause of the global crisis in 2008 and its developing process as below. The pledge of 'Ownership Society' propounded by Bush in the 2000 presidential election was the underlying cause of the financial crisis. Based on this pledge, President Bush at that time made a policy of supplying 5.5 million homes to the homeless. For the success of this policy, contributions from Fannie Mae and Freddie Mac was required since the role of their funding and financial derivatives was important. And the rise in housing prices was also essential in order to attract attentions of the homeless. So the time shift of demand from the future happened and the bubble of housing prices occurred, resulting in the vacancy of demand that caused the collapse of bubble which plummeted the prices of financial derivatives. And the financial companies which invested much into the derivatives were at risk of collapse as the economic principle of credit destruction came into playing in the bankruptcy crisis.

It would be easy to relieve the crisis occurring in the future if the cause and developing process of financial crisis, the economic terms and principles that works in its process such as the time shift of future demand, the hollowing out of demand, and the economic principle of credit destruction are understood precisely and well.

7. Research limitation and direction for further research

In the history, a financial crisis has been occurred not only by the overheating of real estate market including housing or stocks market but also by the overheating of the whole domestic market of a national economy which causes a currency crisis resulting in a financial crisis. We would like to keep on researching on all the financial crises.

It is difficult to capture the causal relationship between the cause and the result when the former is temporally distant from the latter. And the cause is hardly believable even if it is captured. However, if an economic event is the result of a long-term developing process, it is common for the result to be a chronic disease and its cure is difficult. Therefore, it is necessary to pay attentions to the developing process of a cause which takes a long period of time reaching the result and to the research for historical instances.

8. References

Choe, Yongshik, 2017. 'Economics Predictable' in Korean, Seoul Korea, Publishing Department of Incheon National University

Choe, Yongshik, , 2009. 'Economic Pathology' in Korean, Seoul Korea, Saebit

Greenspan, Allen, 2007. 'The Age of Turbulence', N.Y. USA, Penguin Books

IMF, 'International Financial Statistics 1999', Washington D.C., IMF

Kaletsky, Anatole, 2011. 'Capitalism 4.0; The Birth of New Economy', Philadelphia USA, PublicAffairs

Kindleberger, Charles P. & Robert Aliber, 2005. 'Manias, Panics, and Crashes; A History of Financial Crises', 5th Edition, Hoboken, N.J. USA, John Wiley & Sons, Inc.

Lowenstein, Roger, 2010, 'The End of Wall Street', N.Y. USA, Penguin Books

Smiley, Gene, 2002, 'Rethinking the Great Depression', Chicago, USA, Ivan R. Dee

Rogoff, Kenneth & Carmen Reinhart, 2009. 'This Time is Different', Princeton USA, Princeton University Press