The Case of Mongolian Economic and Banking System

Dashdendev Narantyua* Toshiaki AOKI**

This paper is aimed to the resolving of some vital questions of the banking system, among it, to the doing of research and analysis in banking risks.

However, we did not emphasize to begin the research with banking risks only, instead, we preferred to draw a brief outline of Mongolian economy first. We have done this study in the 1st chapter “The case of Mongolian Economic Systems”.

In the 2nd chapter, we reviewed the main research background with the topic “The case of Mongolian Banking Systems”. In connection with this research, the issue of banking risks is inevitably raise in coherence with the current situation of banking system and the actual problems and questions to be settled in the further.

In Mongolia, the banking system with a type of “Central and state banks” has been transferred into the rather reverse system with multiple types including central and commercial banks, non-banking financial organizations, and savings and credit unions.

Traced from this research, the subsequent questions relative to the banking management and legislation seeking their optimal answers are getting appeared one after one.

Keyword：trends in asset prices, regulations and policy responses, effects of asset price fluctuations, risk management

モンゴルにおける経済体制と銀行制度について

Dashdendev Narantyua 青木俊昭

本論は、モンゴルにおける銀行業務のリスクに関する問題点を検出すること、および銀行システムをめぐるいくつかの重要な問題を解決することを目的にしている。とはいえ、本論では、銀行業務のリスクだけに主眼をおくのではなく、最初にモンゴル経済に関して概略を描くことを試みている。

まず第１章では、モンゴルの経済制度について紹介する。そして、第２章では、モンゴルにおける銀行制度に関する主要な研究の背景を検証した。これと関連して、銀行業務のリスクに関わる問題は、銀行システムと現実の問題の状況と、さらには今後において解決されるべき諸問題を必然的に生起させる。モンゴルでは、これまで「中央銀行と国立銀行」とからなる銀行システムは、中央銀行と商業銀行、ノンバンク的な金融組織と貯金を含む複数のタイプからなる､以前とは全く異なったシステムや信用組合などへと移行してきた。したがって、銀行業務管理に関しての重要な問題とその最適解を求めるための法規制の問題は、この研究を通して、一つずつ明らかにしていく。

*東京情報大学 大学院 総合情報学研究科
Tokyo University of Information Sciences, Graduate School of Informatics
**東京情報大学 総合情報学部 情報ビジネス学科
Tokyo University of Information Sciences, Faculty of Informatics, Department of Business and Information

2010年12月20日受理

Introduction

Along with the Mongolia's transition from the central planned economic system to the market economy, a new economic reform is commenced in this country. In connection with the transformation process, the new laws and rules elaborated for past 20 years is standing as an actual argument requiring active and industrious investigation of the economists and scholars in working out of the renovated economic policies of Mongolia.

Therefore our research work is aimed to the resolving of some vital questions of the banking system, among it, to the doing of research and analysis in banking risks.

However, we did not emphasize to begin the research with banking risks only, instead, we preferred to draw a brief outline of Mongolian economy first.

Thus, we have done a study in the 1st chapter "The case of Mongolian Economic Systems" from the purpose of making our writing to the readers more understandable.

In the 2nd chapter, we reviewed the main research background with the topic "The case of Mongolian Banking Systems". In connection with this research, the issue of banking risks is inevitably raise in coherence with the current situation of banking system and the actual problems and questions to be settled in the further.

In Mongolia, the banking system with a type of "Central and state banks" has been transferred into the rather reverse system with multiple types including central and commercial banks, non-banking financial organizations, and savings and credit unions.

Traced from this research, the subsequent questions relative to the banking management and legislation seeking their optimal answers are getting appeared one after one.

We think it is due to give proper and true answer to the question "Why" as for the banks bankruptcy faced in Mongolia in recent years.

Therefore it will be seen from our research work that the current banking management problem − banking risks are originated from many causes including the managerial improper operations, unaccountability and poor risk management as well as from bad economic accounting and non-prediction of risks by loan officers and our research is directed to find rational response to it.

Mongolian economy is bulleting highly from supply side shocks. Capital inflow and aggregate demand of Mongolian economy increased thanks to relatively stable economic environment through out last several years. The large capital inflows helped to promote economic growth and export performance, but on the other hand it led to rapid monetary expansion, accelerating inflation, and a loss of competitiveness and faster growth in securities and housing prices.

But bubble burst started as turbulence in segments of US subprime mortgage market turned into a global financial crisis from the second half of 2008 and it caused complications in Mongolian financial sector. Due to the falling price of mining products in a short period of time, foreign trade deficit increased as same as the other economies around the world, which are dependent on this sector. Also it resulted in a decrease of foreign currency reserve and weakening of domestic currency against foreign currencies. Also domestic banking sector lacked financial source as a result of foreign institutions retracted its loans from banks and enterprises, delay in investment proposals, decrease in workers remittance from overseas. Thus, a lack of capital caused a shortage of sources within the banking sector, and it interrupted issuance of loan. As a result of those changes, asset price decreased dramatically in short run due to declined demand of all kind of assets such as house, equity and land.

1.1 Trends in Asset Prices and Macroeconomic Variables

In recent years, Mongolian economic growth was provided by slump in global prices for copper and other export commodities. With improved current account and fiscal positions, both investment and consumptions of private and public sectors increased dramatically. Especially, mining and construction sectors saw boom in those periods until the second quarter of 2008 year.

It was one of the signs of economic overheating. Annual real GDP growth had averaged to 9.1 percent from 2004 to 2008 year due to high copper and gold prices on the international markets. But as those prices have been declining, Mongolian economy followed the fall and slowed down in last 3 quarters. However, the authorities expected that the economic growth would be 9.8%； close to two digits at the end of 2008 the real performance was 8.9%. Still it wasn't bad result and if we see contribution, agriculture sector grew by 5.0% aided by favorable weather and fiscal incentives to produce wheat: services increased by 15.9% and being the most important source of the GDP growth last year and industrial output fell by 1% to its lowest rate in a decade. Rapid growth of monetary aggregates brought precondition for

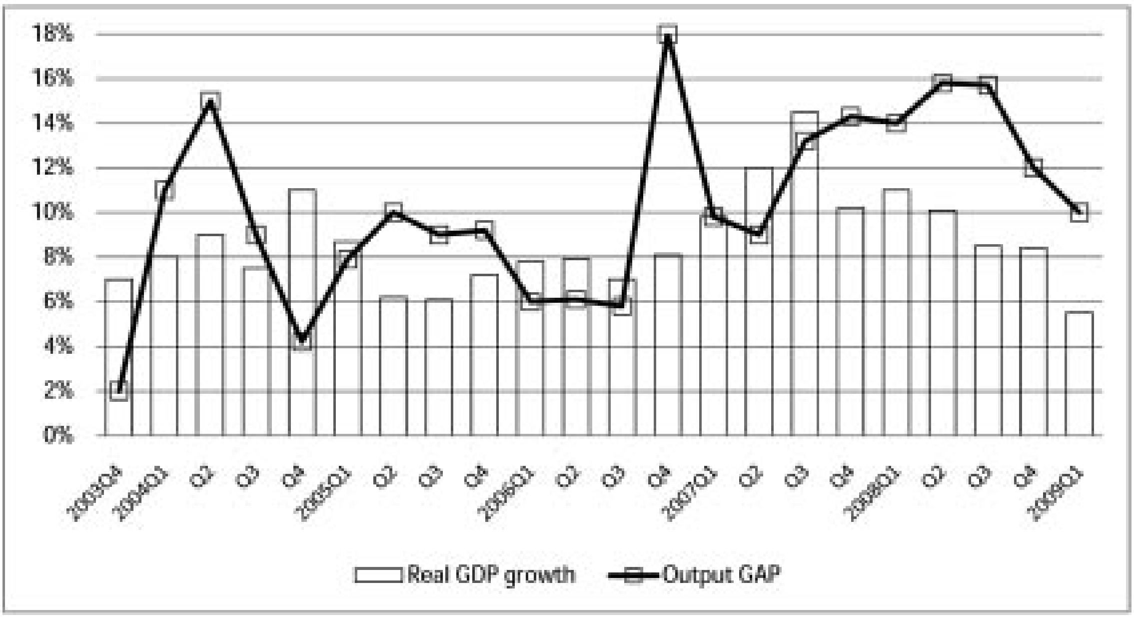

Chart1：Real GDP Growth and Output GAP

Data：“The statistical book of Mongolia” 2010 year price increase in economy. In addition, sudden supply side shocks attributed to oil and food prices growth in 2007, adversely affected inflation in the last quarter of 2007 and first 3 quarters of 2008. Inflation was 14.0% and 23.2% respectively in 2007 and 2008 year. Source of this rapid increase of inflation was both external and internal economic factors. For example, supply side factors such as import goods, oil and food price increase, inefficient system of food supply and unstable exchange rate, demand side factors such as increase of both public and private sector salary and expenditure of social assistance and last 5 years persistent increase of monetary aggregates and credits, and structural factors such as increase of administrative price and lack of competition in some sectors, food supply and oil etc.

Inflation, characterized by the shortage of food, began to soar from the second half of 2007 and continued throughout the first 3 quarters of 2008. That increase began from world oil price shock and continued with exchange rate movement and import price rise due to shortage of food. The first sign of annual inflation fall was observed in September 2008 when slight decrease of food price due to fuel price decline occurred (Table 1).

As mentioned before, one of the factors affecting inflation in Mongolia is the fact that

Table1：Food, Fuel and Net Inflation

	Food inflation (y-o-y)	Fuel inflation (y-o-y)	Net inflation (y-o-y)	CPI inflation (y-o-y)	
2006Q1	7.3%	22.1%	2.8%	5.0%	2006Q1
2006Q2	3.4%	7.5%	1.0%.	2.1%	2006Q2
2006Q3	3.9%	17.8%	4.3%	4.4%	2006Q3
2006Q4	2.2%	10.2%	6.4%	4.8%	2006Q4
2007Q1	6.9%	3.7%	4.2%	5.3%	2007Q1
2007Q2	8.6%	1.1%	3.4%	5.5%	2007Q2
2007Q3	22.1%	-1.0%	5.3%	12.1%	2007Q3
2007Q4	24.6%	23.2%	6.3%	14.0%	2007Q4
200801	33.3%	44.6%	10.7%	20.6%	2008Q1
2008Q2	51.8%	40.3%	18.3%	32.4%	2008Q2
2008Q3	36.9%	79.3%	26.5%	31.7%	2008Q3
2008Q4	24.5%	13.2%	22.7%	23.2%	2008Q4
2009Q1	15.2%	-3.0%	19.5%	17.2%	2009QI

Data："The statistical book of Mongolia" 2000 year our prices are heavily dependent on import prices. Thus, 30 percent of CPI basket constitutes import goods and exchange rate pass through coefficient is estimated to be around 50 percent in 2008. Therefore the exchange rate plays crucial role for the Mongolian economy.

In August 2007, the first sharp depreciation of MNT (Mongolian tugrug) against USD was observed for last 2 years. The reason was based on rumors that MNT will depreciate dramatically. It influenced public expectation significantly. Meantime, due to oil price increase, inflation upward pressure on domestic market was mounting up. At that time, the Bank of Mongolia (BOM) aimed to decrease inflation pressure by stabilizing exchange rate fluctuation. As a result of the BOM supplied huge amount of USD to domestic market and could stabilize nominal exchange rate till the 3rd quarter of 2008.

But with the international financial crisis and rapid deterioration of terms of trade, current account ran in deficit. Consequently, it increased net demand of foreign currency on domestic market, and resulted in depreciation of the MNT against the USD as shown in the Chart 2, sharp depreciation of nominal exchange rate took place from the 4th quarter of 2008 to the 1st quarter of 2009. By 33.5 percent compared with same period of the previous year. Weak domestic foreign exchange market infrastructure, limited information environment; domestic trade preference in USD and public expectation are motivated by rumors contributed to MNT rate depreciation.

Monetary aggregates have increased significantly over last 8 years and averaged 32.7 percent between 2001 and 2008 (Chart 3). This significant increase was driven by not only capital inflow from other countries, but

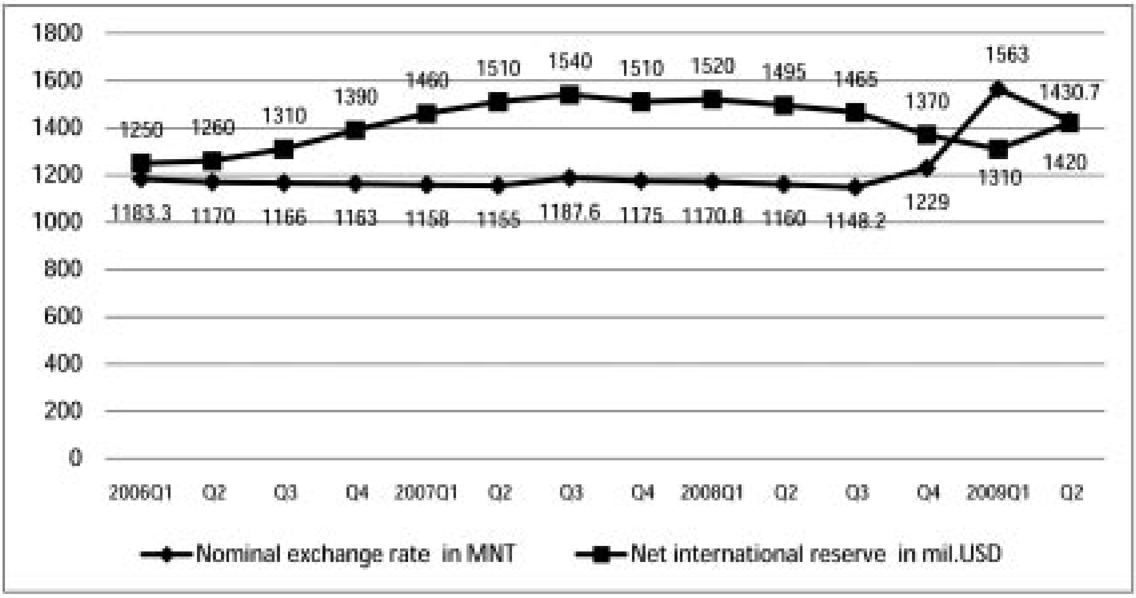

Chart2：Net international Reserve and Exchange Rate

Data： "The report book of Mongolian Banking System" 2010 year

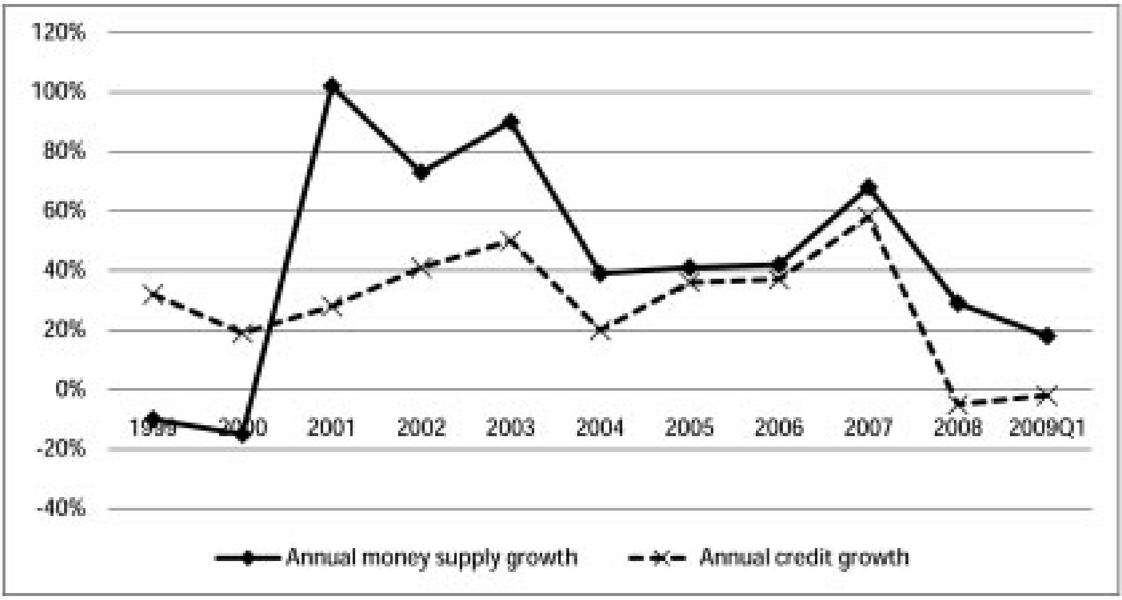

Chart3：Liquidity and Credit Measures

Data：“The statistical book of Mongolia” 2010 year

also by dramatic fiscal expansion. Increasing money supply heated up economic activities and increased inflation upward pressure. As a result, credit grew more than 60 percent, GDP gap reached 10 percent and inflation rate rose. Starting from the 2nd half of 2007, supply side factors such as oil price shock and exchange rate depreciation began to aggregate inflationary pressure in economy at the end of 2007.At this time, the BOM took steps to bring down inflation, caused by supply factors. The BOM intensified further tight monetary policy through a series of step-by-step measures taken against the rising inflation. A significant capital run due to the world economic crisis and shortage of resources within the banking system also contributed to the annual growth of M2 falling down to -3.4 percent for the first time ever. Furthermore, banking sector also showed signs of stress. High inflation resulted in negative deposit real interest rates and combined with currency depreciation and a significant amount of capital run led to MNT deposits flight and a liquidity squeeze among the banks. The BOM imposed a conservatorship and appoint a conservator on solvency problematic. Anod bank in order to stabilize banking sector, the authorities issued a blanket guarantee. As a result of increasing capital inflow and trade balance surplus, domestic investment and money supply in recent years, private wealth rose vast in some level of nation. In that time, main problem came from "Where should we store our wealth?" Most of them had chosen from several possibilities such as buying house, participating in equity or deposit market.

Chart4 illustrates that stock market capitalization had increased 3.5 times in just one year (from 2007Q1 to 2008Q1) and declined 60 percent in next year (from 2008Q1 to 2009Q1). As mentioned before that raise was driven by increasing income of private sectors. Moreover, bigger portion of that raise is also explained by some big and medium sized banks interested and funded from stock market such as Anod and Zoos banks. One of the biggest influenced asset markets was house and construction sector. In times of over heated economy, output of construction sector almost doubled and house price boom took place in last 3 years. Not only increasing both public and private sector income and remittance from migrants, but also increased migration from rural areas to urban areas influenced housing price and apartment demand sensationally. Responding to increasing demand, many big and medium sized enterprises invested a lot in construction sector.

As shown in Chart 5, house price had increased dramatically from second quarter 2007. In meantime, banks eased their mortgage loan criteria. Moreover, many people expecting further house price increasing put upward pressure on housing. Following house prices, raw material prices started to rise. But house price burst in the beginning of the third quarter of 2008 as banks found them in liquidity shortage, resulting delays in housing construction projects and slowed down mortgage loans. Hence, housing demand declined.

New construction sector faced the lack of demand and loan supply. But construction companies continued to keep their prices at

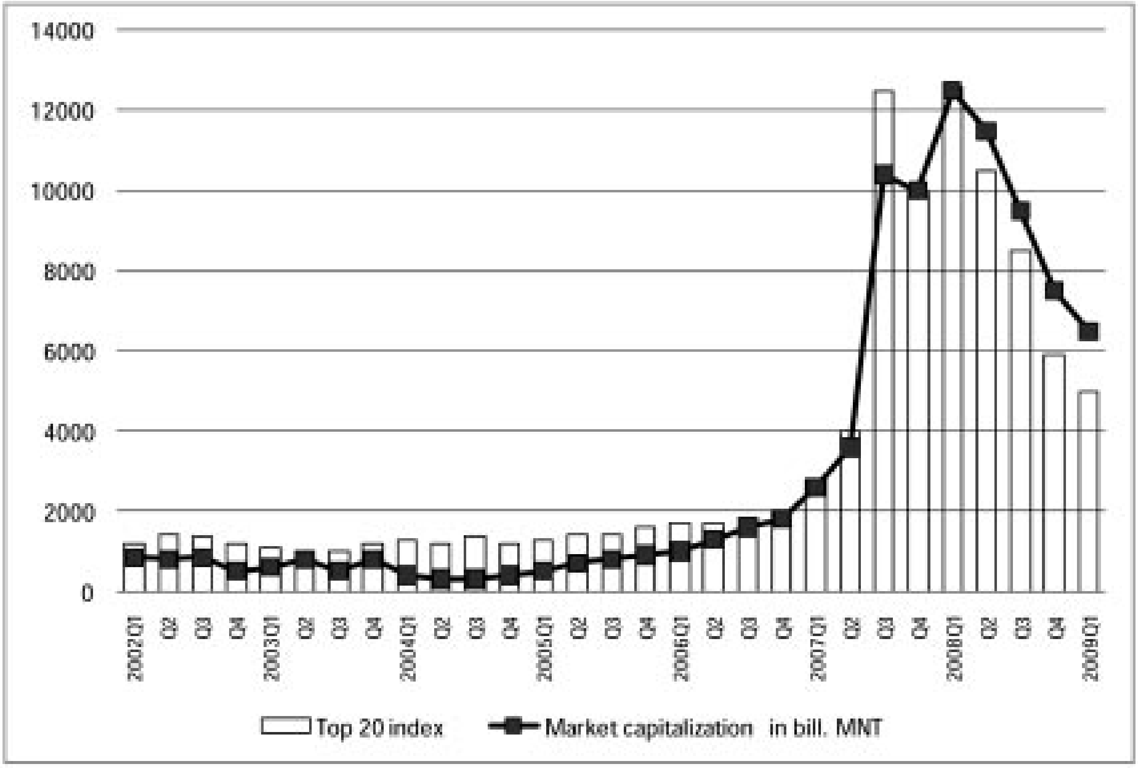

Chart4：Stock Market Indicators

Data： "The book of Mongolian Banking System" 2010 year（MNT is Mongolian tugrug） boom time high level, like waiting for miracle. With increasing non-performing construction and mortgage loans, hanks faced liquidity problem. Banks trying to solve the problem started to force construction companies to decrease their prices and discounting those willing to buy from construction companies with bank loans.

Chart 6 shows dynamic of mortgage and construction loan for the period of 2006Q1-2009Q1. As it can be seen, both construction and mortgage loans almost doubled and even tripled during that time. But at the end of the period their growth decelerated from the 3rd quarter of 2008.

1.2 Regulations and Policy Responses to Asset Price Fluctuations

Many, perhaps most, economists believe in rules. But when speculation threatens substantial rises in asset prices, with a possible collapses in asset markets later and harm to the financial system monetary authorities confront a dilemma calling for judgment, not cookbook rules of the game. Such a conclusion may be uncomfortable.

Monetary authorities face financial problem in economy where assets price fluctuations are observed. Unfortunately, there will be not only financial instability, but also souse part of economic institutions will get harmed and lose their money.

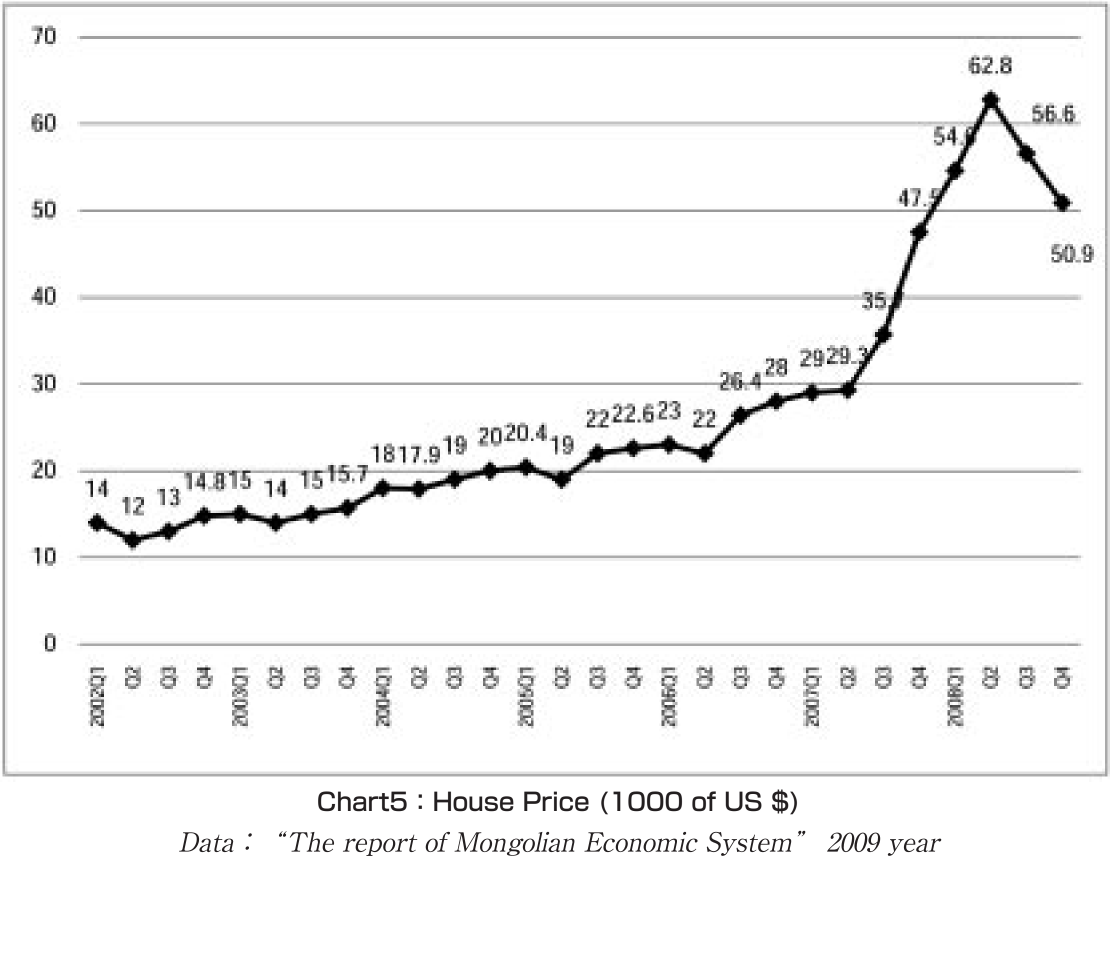

Chart5 : House Price (1000 of US $)

Data : "The report of Mongolian Economic System" 2009 year

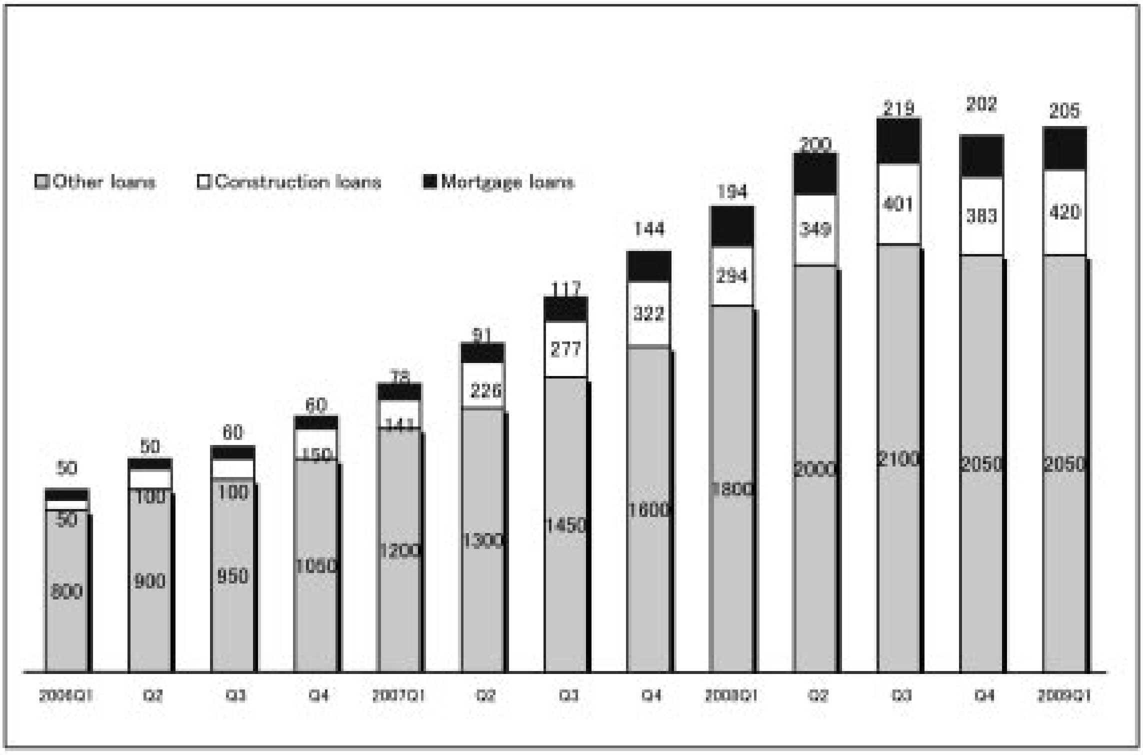

Chart6：Mortgage and Construction Loan （billions of Mongolian Money）

Data： "The statistical book of Mongolia" 2010 year

In recent years, the BOM preferred to use non-direct instruments such as policy rate, reserve requirements and open market operation etc. So the BOM averted from using direct credit control on both volume and interest rate. Purpose of this was not to decrease effectiveness of the instruments arising from evasion as the financial market develops and economic agents learn how to circumvent them, to decrease inefficiency in resource allocation, and to avoid potential inequity during implementation.

As for regulation and law related to asset in Mongolia, there isn't any restriction or limit on purchasing and renting houses. The only restriction is that person who buys house, must pay 2 percent of tax from value of its house. A person can have any number of houses, which allows house demand to increase or speculate on this activity.

During dramatic increase in asset price, the BOM implemented a number of policy actions. But all these policy measures were not only direct response to asset price fluctuations, but also aimed to protect financial and economic stability. Because of some clear signs of economic overheating such as high inflation, persistent increase in monetary aggregates, positive output gap and asset price rise, the BOM started to tighten monetary policy by increasing its policy rate several times from the 3rd quarter of 2007. Moreover, the BOM increased reserve requirement ratio and some of prudential ratios for the commercial banks. Those policy measures were to cool economy and prevent inflation expectation. The BOM also advised commercial banks about tightening their credit requirements, bewaring from dramatic growth of credit and abiding strictly regulation and ratios.

The BOM produced minimum standard requirement for home mortgage loans. This regulation is must follow for banks and exemplary for other lending institutions. The regulation tightened lending not to ship over non-performing loan in construction into household debt among other benefits in terms of market regulation.

At the time of decreasing asset prices, the BOM introduced new instrument for commercial banks. The BOM started to grant loans to construction companies through banks. These loans were aimed to complete constructions with at least 80 percent done. In the reporting year, the BOM issued the construction loan refinancing worth MNT 55.7 billion to two banks. The BOM conducted a survey to ascertain how much refinancing was needed to complete ongoing apartment buildings. By the agreement between BOM and bank, the BOM provided up to 70 per cent of total required financing and bank provided the rest itself.

The BOM worked out projects of “Law of Mongolia of Real estate collateral” etc for the mortgage market development. The legal framework provides health environment for mortgage loan market to prevent customers and banks from possible failure.

2. What are the Effects of Asset Price Fluctuations on the Soundness of Financial System?

Recent Mongolia's economic downturn is caused not only by asset market boom and busts, tint also other economic sectors. For example, wholesale, retail and manufacturing sectors dropped, which contributed to banking sector illiquidity problems. So we showed banking sector condition in last year below.

2.1 Diversification of banking sector

As of the end of year 2008, 16 banks and 1 foreign representative office were operating their financial intermediation in Mongolia through 1080 branches. Currently, number of total customers including companies and individuals reached to 2.4 million, number of borrowers is 516.8 thousand, and depositor is 1.3 million in banking sector. Diversification plays important role in banking sector even in economy. If bank could diversify its operation in many markets with many products, it can reduce bank's vulnerability and ensure better structure. That means, well diversified bank has a more power to pass the difficult times. Here we showed banking sector diversification in Mongolia.

As shown in Chart 7, banking loans are highly concentrated on wholesale and retail trade, construction and manufacturing sectors. And newly developed mining and real estate activity follows. Nature of Mongolian economy is that much more concentrated on foreign trade. Export in Mongolian economy hasn't diversified a much thus concentrated on commodity goods including copper, gold and cashmere. Most wholesale and retailers mainly

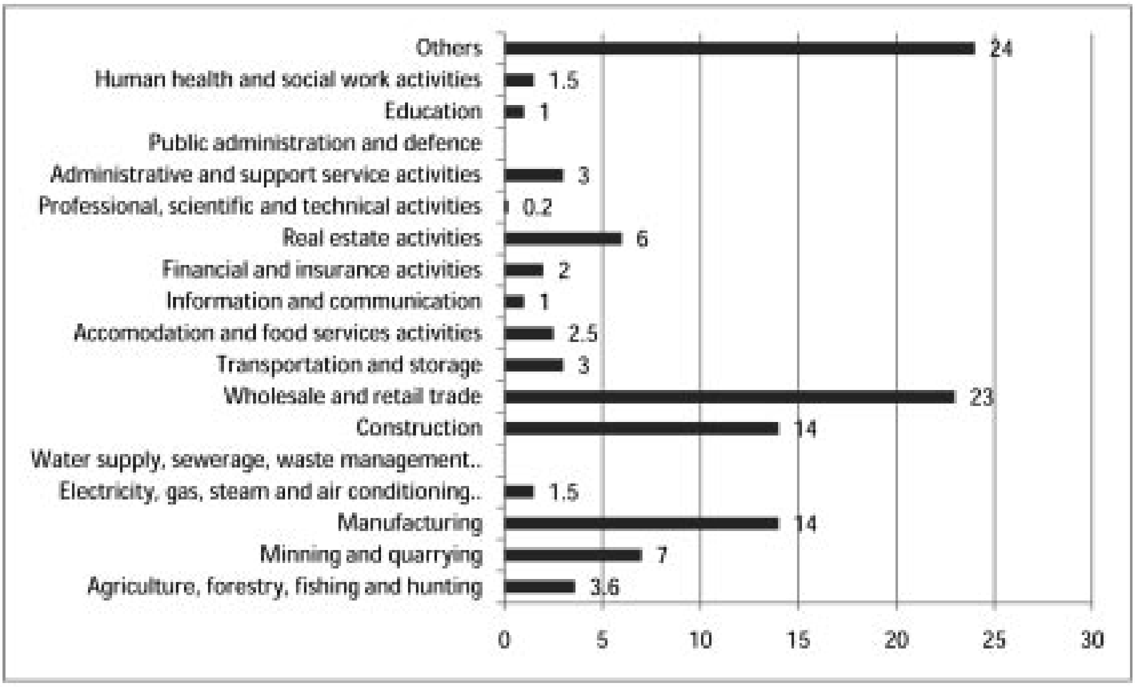

Chart7：Banking Loan Distribution to Economic Sectors（as end of 2008）

Data：“The case of Mongolian banking system” report from World Bank 2010 year

concentrated on import goods. Moreover, they are good customers who have long time loan history related with commercial banks.

Moreover in last 3 to 4 years, construction and mining （especially gold mining） sector became hot in economy, so loan to those sectors increased dramatically and almost every companies operated their activities in those sectors. Actually, banking loan follows economic activities and cycles. For example, economic sector that developed much in recent years has bigger loan demand and so on. So bank loan tends to go to that sector. But due to recent economic recession and banking sector liquidity, all economic activities are now frozen and commercial banks are facing big challenges.

Not only banks are facing challenges with loan supply and repayment, but also liquidity and liabilities. Banks liabilities mostly consist of customer deposits and both deposit rate and loan rate are still higher than developing countries. Seen in Chart 8, 74.7 percent of total funds of banks came only from customer deposits in 2004. But this scenario undergoes changes in recent years. As of 2008, foreign investment to banking sector and interbank transactions increased and share of customer deposit in bank funds decreased. It is good sign of diversification for the source of liquidity of banks and banks became more flexible for liquidity. But still lack of stock market development and confidence between commercial banks, there is still room to develop money market and increase diversification for funds.

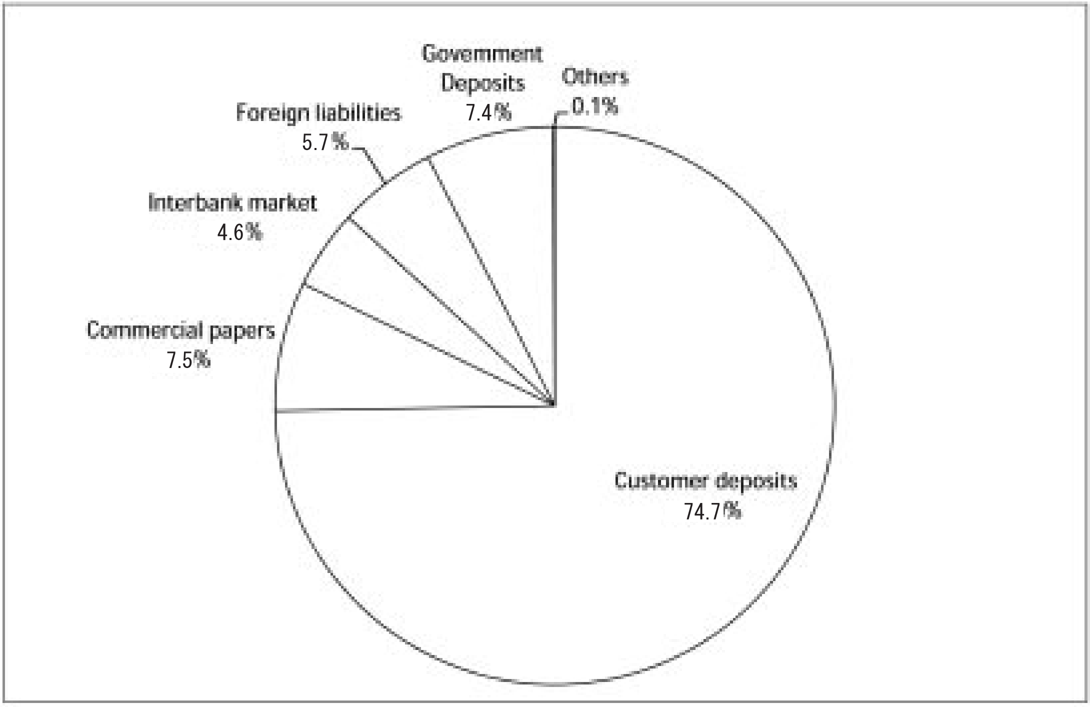

Chart8：Funding Profile in 2004 year

Data：“The statistical book of Mongolia” 2010 year

Last 2 years' global financial and economic crisis affected most of domestic market through decrease of our main export good prices, reversal of foreign direct investment and increase of main import good prices. Associated with the collapse of mineral prices in world market, the global financial downturn and slowdown of domestic economy, credit risk of the banking sector saw significant growth. During the past 5 years non-performing loan to total loan ratio had been constantly declining, however, the ratio shot up to 7.2 percent and the non-performing loans considerably doubled in 2008 compared to the previous year.

2.2 Financial stability measures

Loan to Deposit Ratio: As economic growth intensifies, money demand increased dramatically in past years. Banks reacted to that. On average, annual loan growth between 2004 and 2007 was around 47.3 percent. Meantime average annual growth of broad money was 36.5 percent. As concluding from these numbers, we can clearly see that loan to deposit ratio constantly increased till 2007. We should notice here that during that years both broad money and loan growth were high, but loan increased more quickly than broad money and banks fed this gap from another financial source including foreign investment and government deposit.

As shown in Chart 10, loan to deposit ratio

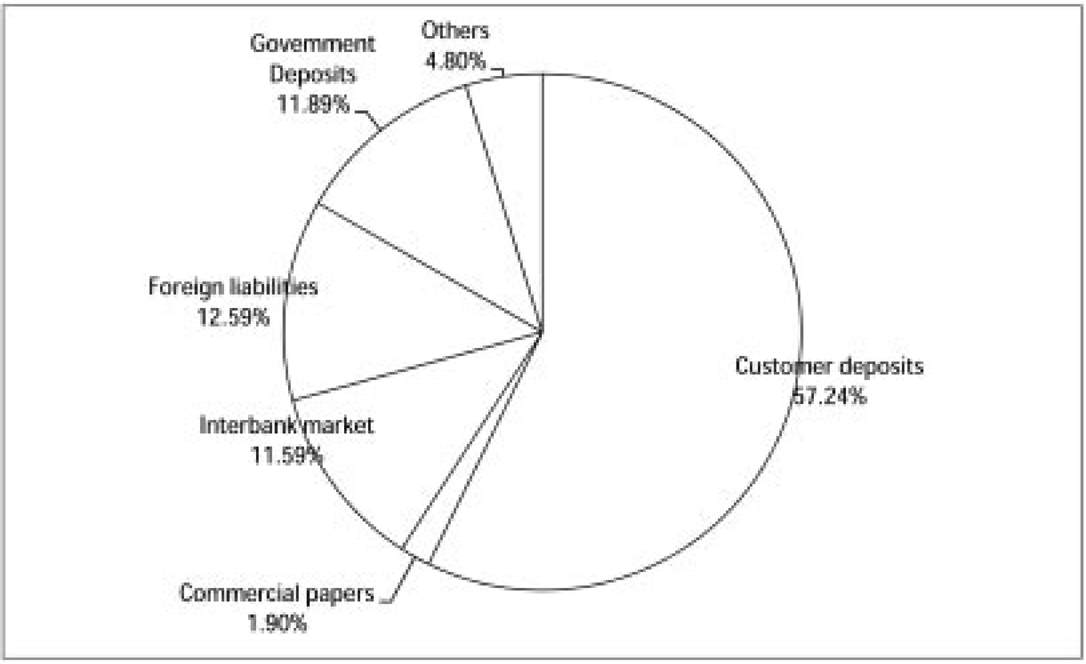

Chart9：Funding Profile in 2008 year

Data：“The statistical book of Mongolia” 2010 year

decreased from beginning of 2009, a reason of it was fewer new loans' issued following after economics slow down. In the meantime, because of Anod bank problem, sudden deposit run from banking sector occurred and confidence in banking sector fell in December 2008. But as response of these actions, the BOM implemented some kind of policy measures.

Capital adequacy ratio（CAR）：Unclearness of the economy in current situation is making the hanks' decision making process stagnant and decreasing the supply of loan and accelerated inflation rate forced deposits and transactional accounts to decline. CAR declined due to bank loses, which incurred because of raising non- performing loan, heighten market risk. Economic slow down in turn worsen bank loan repayments, hence loan outstanding fell largely by provisioning, which seriously erodes capital base of banks. Higher market risk causes fell in risk appetite of lending institutions. Therefore, CAR is still at the level above BIS 8V.

Moreover, in the time of decreasing CAR in banking sector, the BOM decided to revise its regulation of prudential ratio and increased CAR to 12%. The objective of this measure was that to help deal with pro-cyclicality in banking sector and to enhance resilience of both individual banks and the banking system as a whole. This kind of dynamic provision can be important prudential tool for emerging economies, where banks dominate financial intermediation.

Loan to value（LTV）ratio：Loan to value ratio is one of the key risk factors that lenders assess when qualifying borrowers for a loan.

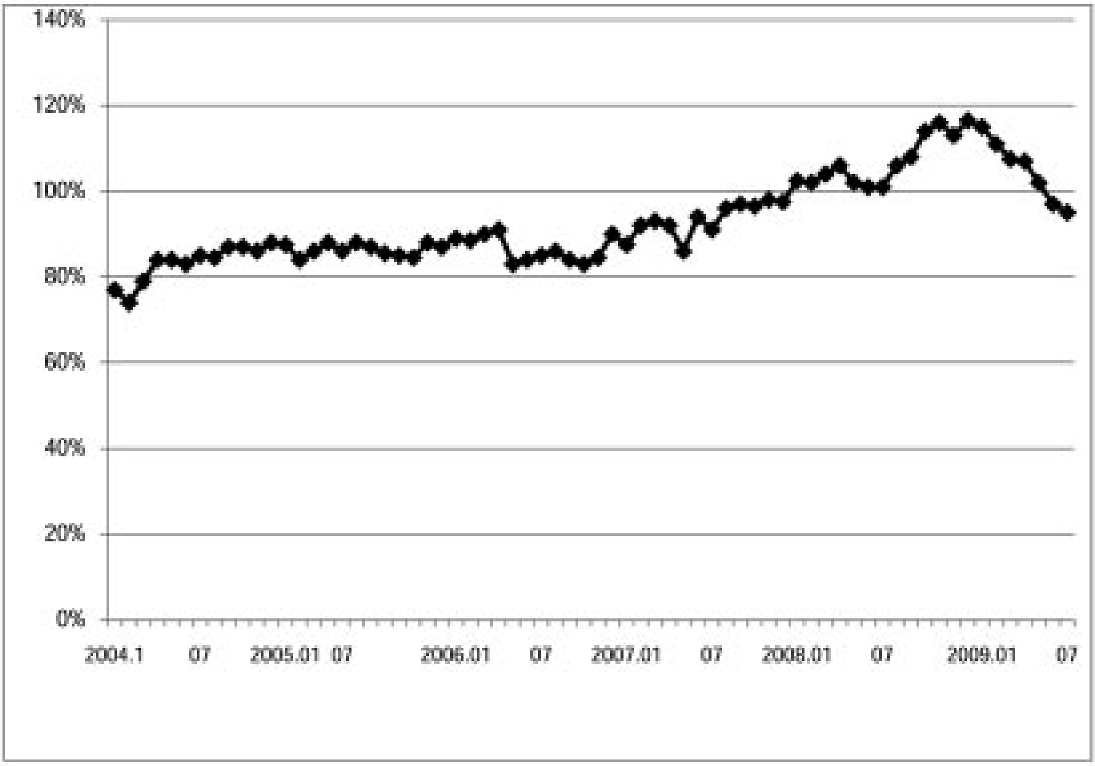

Chart10：Loan to Deposit Ratio

Data：“The report book of Mongolian Banking System”2010 year

LTV ratio of a loan increases, the qualification guidelines for certain loan programs become much stricter. However, we don't have database to calculate whole sector LTV ratio, we calculated it on mortgage market.

3. The Policy Response

3.1 The Policy responses（2009 year）

The Mongolian authorities didn't appropriately respond to the continuously increasing asset prices. In the momentum of high economic growth Government's support tor construction and mining projects, perhaps, too generous social programs stimulated economy further. Bank lending fueled credit growth in combination of afore mentioned measures which generated platform for asset price increases at high pace.

For the monetary policy side, the BOM had carefully observed economic and monetary conditions. After accelerating inflation, money growth and economy over heating were observed, the BOM started to implement tight monetary policy. In this regard, the BOM took the policy measures such as rising its policy rate twice from 6.4% to 7.4% and 8.4% in October and November 2007 respectively and increased required reserve ratio by 0.5 percentage point. Moreover, The BOM increased CAR ratio of some banks that faced liquidity problem at the beginning of 2008. All

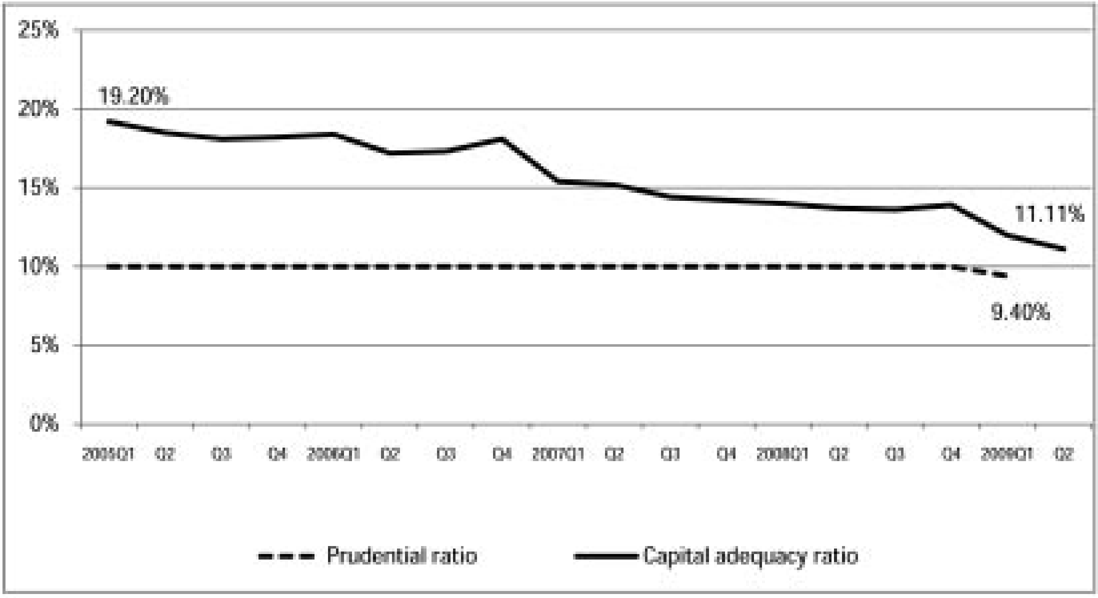

Chart11：Capital Adequacy Ratio

Data： "The report book of Mongolian Banking System" 2010 year

these policy actions against high inflation continued throughout 2008. As a result, monetary aggregates rapid growth slowed down during that time.

The only measure implemented by BOM directly to construction sector was the construction loan refinancing. The BOM granted loans to construction companies through banks', who lent to the construction sector in order to prevent failure of normal banking operation. These loans were given by banks to apartment building construction companies, which were at least at its 80 percent of construction works. But result of this measure wasn't good enough as expected. The reason was not only the financing was widely misused by companies, but also banks didn't monitor use of funds.

3.2 Monetary policy instrument in reacting to asset prices (2009 year)

Most Central banks' main objective is to ensure stability of price and within this main objective they also aim to promote balanced and sustained development of the national economy, through maintaining the stability of financial markets. However, still researches haven't fully agreed on fact that whether the monetary authorities should respond to asset price fluctuations or not. Obviously it depends on how asset markets play considerable role in economy and how asset market effects to economy.

As we determined in analytical section, asset markets are, mainly stock market and housing sector, most emerging markets in Mongolia. So when economy is in boom path, stock market and housing sector followed economic movement. But after economy's boom burst, again those sectors faced problems. Hence only thing that we should consider is that, do asset prices contain reliable information about inflation and output and how does asset price fall affect banking sector. As we saw in cross correlation analysis housing market has a positive effect to inflation within 2 quarters. It means if house price goes up ; inflation will increase within 2 months. But it is possibly explained by co-movement of inflation and house price which says that both inflation and house price movements are caused by excess demand. Moreover, asset markets did influence banking sector（From section 3）, Construction sector shutdown weakened banking sector loan quality. Some medium sized banks which financed to construction sector faced real problem. They have no liquid asset and financial prudential ratios getting worse quickly. In this case, monetary authorities should be aware of shifting construction sector problem to banking sector. Another important aspect of responding to asset price bubble is that whether monetary authorities can distinguish between fundamental and asset price bubble behavior? If monetary authorities cannot distinguish between fundamental and bubble, they should not respond against price fluctuation. But determining price boom is very difficult. But no matter we could determine that should monetary authorities respond to asset prices or not, we should determine that which instrument will be the most appropriate. Current global economic conditions showed that conventional monetary instruments can't respond properly against asset price bubble and burst. Currently, major central banks have introduced "unconventional monetary policy measures" to deal with the economic and financial crisis that materialized it the aftermath of the bursting of the global credit bubble. The reasons of choosing that unconventional policies are. The risk taking capacity of various economic entities was severely damaged during crisis time, and as a result, the effectiveness of conventional monetary policy was seriously hampered.

It took time to recapitalize the banking system, which was most effective and vital in revitalizing the economy. The injection of public capital into weakened financial institutions was indispensable in stabilizing the financial system, but was politically unpopular. Uncertainty regarding the transmission mechanism of monetary policy is much larger than in normal times. Therefore, regardless of whether experimental types of monetary policy measures were introduced or not, explaining the intentions of monetary policy decisions to markets and to the public will be the key challenge. Nowadays, the Central Bank is seeking some room to support asset markets by issuing its treasury bill to public in stock exchange. The BOM believes that policy measure can encourage stock market and bring back confidence of stock exchange.

4. The Mongolian Banking Sector

4.1 Main indicators of banking sector

Although the banking sector has amassed total 3.3 trillion tugrug during this reporting year, an increase by 301.8 billion tugrug or 10% from the previous year, financial intermediary services have shown a tendency to weaken to a certain extent. Total current and savings accounts have diminished by 615.9 billion tugrug equivalent to 2% and 1,374.3 billion tugrug equivalents to 7.7%, respectively. A breaking down of savings accounts according to currencies with which accounts opened reveals the following findings. USD and MNT savings have suffered the highest drop compared to savings with other currencies by 12.3% and 16.1% respectively. Private term and demand deposits have shrunk by 93.7 billion tugrug or 10.3% and 69.4 billion tugrug or 15.6% respectively whereas deposits of corporate entities such as private companies, state-owned enterprises and financial institutions show stability, resilient towards changes. This statistics show that individuals are more sensitive towards and affected by the current economic crisis than institutional depositors.

Compared with the previous year, term deposit interest rate has gone up by 1.7 points over a year up to 12%, and demand deposit interest rate has increased by 0.1 point reaching 19.4%. By the end of the year, interest paid on savings is 11.9% and last two years average variance is 0.19%. As this two years average is 0.03 point lower than the previous year, it is therefore conclusive to state that savings interest rate has been relatively stable.

As a measure to mend the troubled money resource due to the diminishing of fund raised through savings and current accounts, transactions between banks have gone up to a certain extent. In other words, although by size, sourcing fund from banks, financial institutions trails behind current and savings account, institutional borrowing has been 239.5 billion tugrug more, an increase of 33.3% in 2008 compared with previous year. A noteworthy fact that remainder of loan debt borrowed from the BOM constitutes the majority in the increase of the institutional borrowing, draws an indication that banks are increasingly relying on more expensive lenders to mend up their diminishing money resources.

With banking and financial intermediary shrinking, the bank's profitability has declined to a certain level, witnessing its reserve capital to be reduced by 35.8 billion tugrug, a decline of 9.5%. Deteriorating of Anod bank's operation in 2008, called for an independent inquiry which subsequently led to a setting up of an emergency risk fund in compliance with respective financial regulatory procedures. This incident played a major role as the banking sector finished 2008 fiscal year with 66.9 billion tugrug loss. In addition, a factor that some banks with short position had to nurse direct losses due to high fluctuation of foreign currency rates, contributed its role as well. If Anod bank's loss is excluded, the banking sector has performed with 64.1 billion tugrug profitability.

Asset changes on the balance sheet of the banking sector clearly affirm the fact that the growth of Mongolian economy is slowing down. Total asset in 2007 was growing by 1,063.8 billion tugrug or 45.9%. However, in the reporting year, growth speed of the total assets reached 7.9%, down by 5.8 times. Moreover, total assets of the banking sector account for 59.5% of GDP, a decrease of 14.1%.

There are 16 Mongolian, 1 representative office of a foreign bank active on Mongolian financial market, providing financial services through 1080 retail branches and units. Compared with the previous year, a number of private and institutional account holders have reached 2.4 million, an increase of 20.1% and borrowers 516.8 thousand, an increase of 5.4% and depositors 1.3 millions, an increase of 11.2%.

Although speed of increase in loans issued from banks was slowing in the reporting year compared with the previous, amount reached 453.5 billion tugrug, an increase of 21.4%. This means that the share of profit generating assets within the scope of total assets has hit 74.5%, an increase of 5.4 points compared with the previous year. However, cash and cash equivalents and short term investments have diminished by monetary value, and fell down to 0.7 within the scope of total assets or a decrease of 6.4 points. Comparison of the BOM's treasury bills with that of the previous years, there is 120.6 tugrug differences, an increase of 23% which constitutes 94.8% of short term investment.

As of the end of the reporting year, if total loan issued to be categorized by economic

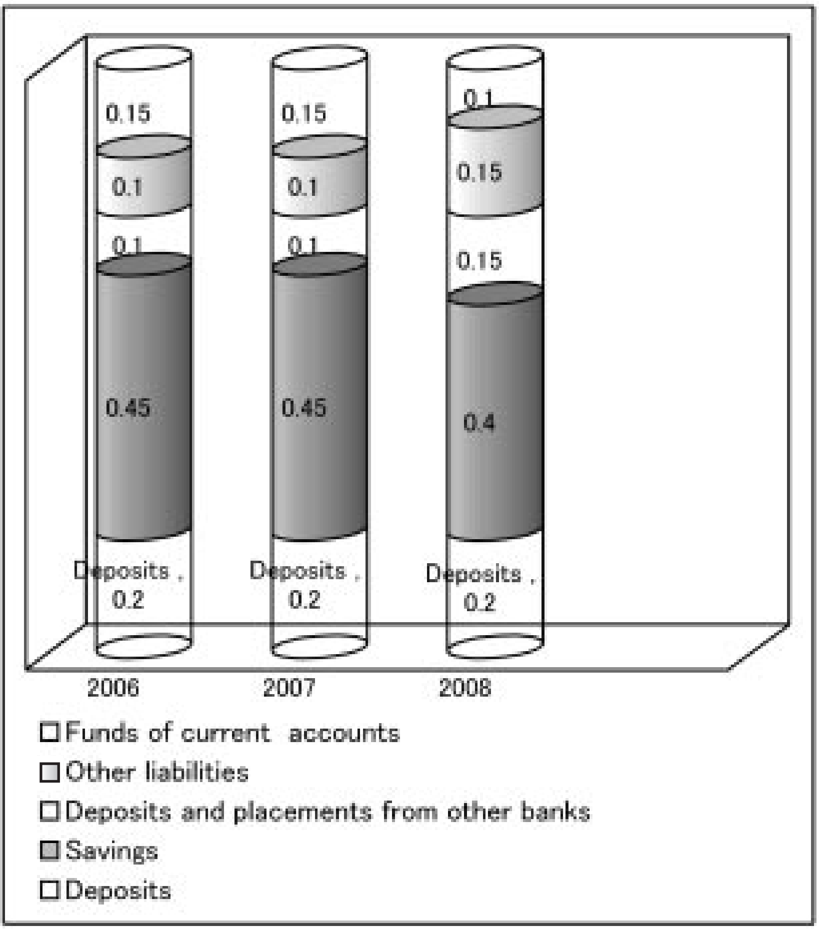

Chart12：Structure of found sources in banking sector

Data：“The statistical book of Mongolia” 2010 year sectors, indicator shows as following -22.7% retail, 29% production and construction, 6.4% mining, 2.6% agriculture. Compared with the previous year, an amount of loan issued to agricultural sector has dropped by 5 by its size within the total loan package. This can be argued in light of the fact that natural disasters that plagued agricultural activities in 2008 considerably increased risk. Loan with more than one year period constitutes 61.8% of total ordinary loans.

In 4th quarter of 2008, current and saving accounts were withdrawn by a significant amount means that scope of financial services shrank, causing a sharp drop in real estate sales. As a result, the major borrower - construction's sector came to an unexpected halt. In return, this vicious circle negatively affected the quality of the loan package.

Despite above mentioned circumstances drove the source interest rate up, general level of loan rate is on the decline, a phenomenon largely due to short and long run competition in banking sector is steadily increasing. As a result, net differences/spread between rates has narrowed down. Net difference between rates/net rate spread in 2008 i.e. interest rate differences between in and out loans, savings is 5.8% means there is 0.6 point drop compared with the previous year. By the end of the year, weighted average interest rate was for MNT loans 20.4%, for foreign currency loans 16.8%, whereas term deposit and term deposit rates were between 2.4%-19.4% and 4.8%-12.0% respectively. Due to factors such as high inflation, decline in supply of loan products, as of the end of 2008 weighted average for the announced interest rate of MNT loans increased by 0.5 point compared with the previous year.

Due to a number of factors including price fall of metals in international markets, global domino effect of financial crisis and shrinking of the domestic economy, banks' loan risk increased to a certain level. Although average weight of bad loans within the scope of total loans package were on the steady decline for 5 consecutive years, in 2008 bad loans hit 188.7 billion tugrug or 7.2%, an increase of 2.2 time compares with the previous year. 36.8% of the total bad loans, 69.4 billion tugrug were defaulted. However, if Anod bank's bad performance which negatively painted the overall indicators of the banking sector is to be removed, debt remainder of the bad loan will be 78.8 billion tugrug. That means it weighs 3.2% of debt remainder of the total loans.

4.2 Banking regulation

Capital adequacy ratio

By the end of the reporting year, across the banking sector, capital to risk-weighted assets ratio dropped to 11.4%, a decline of 2.8 points. A number of circumstances such as increasing uncertainties in the economy which drove decision makings across banks to an almost standstill, explosion of inflation which reduced current and saving accounts, shrinking of capital source which slows down loan repayment of the borrowed institutions, triggering tendency in loans going bad, affected the bank to reduce sufficiency indication of its capital reserve. However, if Anod bank's numbers are excluded from the measurement, sufficiency of the capital reserve is 15.3%, an increase of 1.1 points.

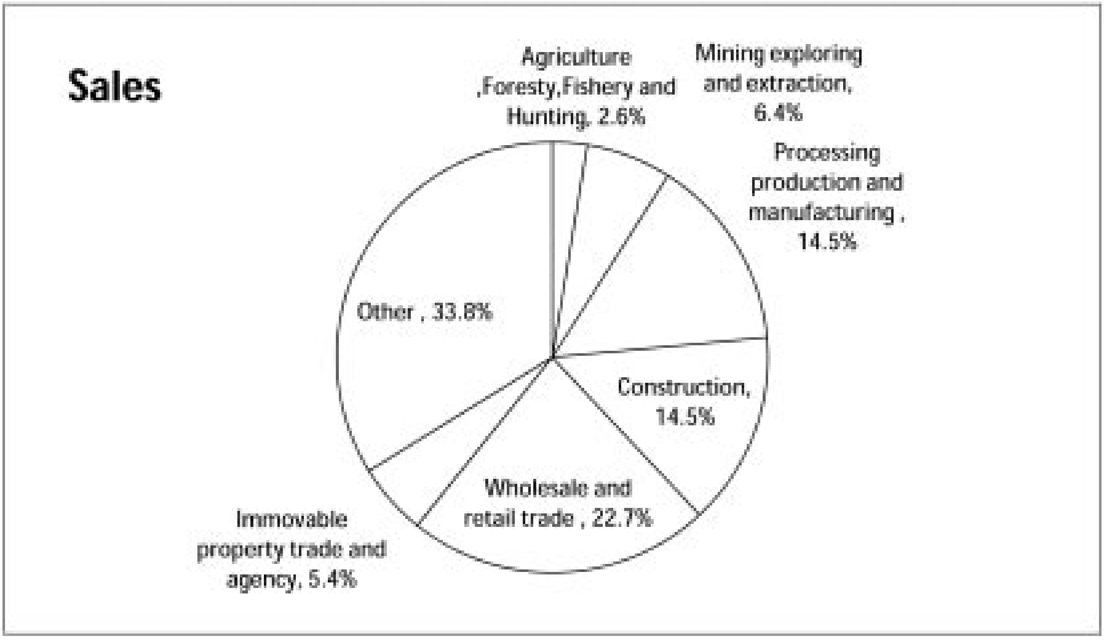

Chart13：Distributed shares of loans debt balance across the economic sector

Data： "The statistical book of Mongolia" 2010 year

Although capital level decreased compared with the previous year, it is still above 8% -benchmark set out by Basel Accord- an international banking regulation.

Liquidity

25.6% of the total assets of the banking sector, as of the end of 2008, are more than one year. Average repayment period of capital, is currently 9.2 months, indicating an increase of 1.5 months compared with previous year. This is because, 33% of total loans were issued to medium and long term project financing. Majority or 69.7% of the capital source of banks are up to 1 year term and average repayment period of total liabilities reached 5.7 months, an increase of 1.5 months. Average repayment period of term deposits which is understood to be the most stable capital source for banks is 7 months.

The reason that liquidity ratio of the banking sector is 23.9% ; down by 6.7 points from previous year is because source capital has increasingly been leaking. In order to enhance and facilitate liquidity management of banks, the BOM has launched a number of new financial products and has been endeavoring to improve workforce capacity and skills of banks. For instance, by the approval of the president of the BOM, passed in 2nd June, 2008, "Liquidity risk management recommendation" was issued. In addition, new financial services facilities such as reverse repo, currency swap and collateralized loan obligation were launched in the market between domestic banks.

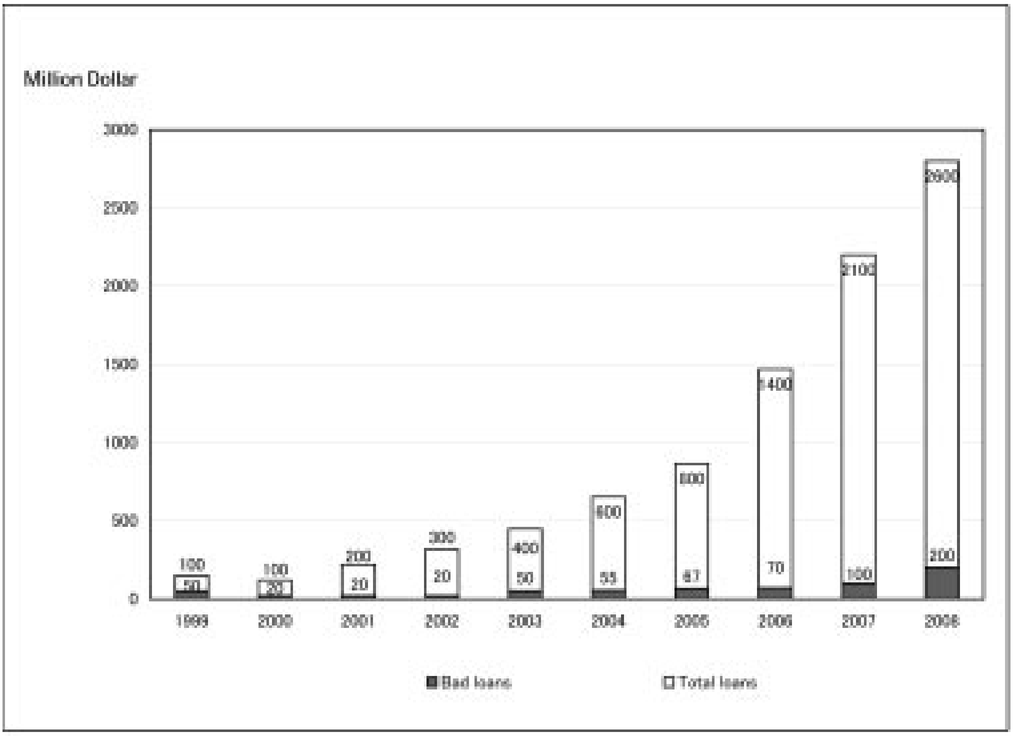

Chart14 : Percentage of bad loans in total loans

Data：“The book of Mongolian Banking System” 2010 year

5. FINANCIAL SECTOR AND OVERVIEW OF FINANCIAL SERVICES

5.1 Current development of the financial sector and its challenges

As of August, 2008, total assets of the banking sector have reached 3.9 trillion tugrug and it is a 1.5% increase over the last 12 months. As crisis hit the international financial markets by the end of 2008 and capital began to leak out of the country, payment ability of some banks deteriorated. Also Anod went into liquidation, consumer trust in banks plummeted and other banks found increasing difficulties in processing quick transactions. In addition, MNT strength continuously weakened against other currencies from 4th quarter of 2008 to 1st quarter of 2009 and quality of loans issued in foreign currencies deteriorated. As a result, banks had to attend losses subjected through currency exchange rate adjustments.

For instance, when news that Anod bank has no liquidity to meet its payment liabilities was made public by the end of 2008, an insolvency panic sent account holders, depositors on a bank run. Withdrawal run high and outflow of deposits went up, reaching 123.8 billion tugrug in October 2008 and 109.3 billion tugrug in November 2008. As a measure to ease the situation in the heat of the hour, the House of Parliament passed legislation on protecting depositors’ money through legal guarantee in 25th of November, 2008. The new act did its job by reducing heavy pressure that was on banks’ payment abilities. During this time, the BOM came with launching of new financial products such as reverse repo, currency swap and collateralized loan obligation aimed at supporting banks' liquidities through transactions between banks. With help of the new financial facilities, from October 2008, to June 2009, banks issued 259.6 billion tugrug loans. As a result of measures taken, transaction execution speed and payment ability rate of banks increased from 21.5% in November 2008, to 31.6% in June 2009. Moreover, by June 2009, deposits began to go up and leveled with a state before the crisis by amassing 2.5 trillion tugrug.

Although, exodus of private and corporate current accounts and deposits stopped, the act which pledges 100% guarantee to protecting depositors money until 25th of November 2012, could place a pressure on taxpayers' shoulder. As of the reporting year is concerned, a number of accounts, deposits that have been covered by the deposit protection act is worth 2.1 trillion tugrug. This is equivalent to 41% of total GDP.

With economic growth slowing down and activities of major sectors are all but coming to a standstill, borrowers' payment strength is weakening and subsequently loan risk is growing. As a result, quality of banks' loan packages is worsening. For example, as of the 2nd quarter of this year, bad debt in mining industry, construction, production, and retail have increased by 19.9%, 17.3%, 12.5% and 10.9% respectively. Across the banking system, debt remainder of bad loans for 12 months up to August 2008, increased by 4.8 times or 323 billion tugrug reaching 405.8 billion tugrug. Weight of the bad debt in the total debt remainder of loans was increased by 12.2 points up to 15.2%. Therefore, banks are more concerned about loan repayments than issuing new loans. Private sectors lending has declined that total borrowers were shrank to 514 thousands, a decrease of 5.7% from August previous year.

Because banks stopped lendings, quality of loans are sending fears of becoming bad, income from loan interest rate is declining and cost of funds protecting from risk associated with losses incurring through debts going bad is increasing. As the first 8 months of this year, banks have made operating loss of 87.7 billion tugrug. Income from loan interest rate compared with the same time last year, has shrunk by 17.3 billion tugrug equal to 5.5%, risk fund cost has 5 times inflated or by 104.1 billion tugrug. With loan quality is worsening across the banking sector, banks profitability is weakened and some banks are unable to meet the recommended minimum amount of capital reserve. Total capital reserve compared with August 2008 has decreased by 178.5 billion tugrug equal to whopping 41.7%. As loan issuance lags down, capital to risk-weighted asset ratio has substantially been reduced (326.4 billion tugrug equal to 10%). In the reporting year, capital ratio has reached 13.1%, a decrease of 0.2 point compared with the previous year. Across the banking sector, the banks who do not meet the capital adequacy ratio requirement need totally 198.4 billion tugrug of additional funds at current. Henceforth, quality of loan is projected further deteriorate ; amount of capital required will increase.

There are a number of pressing matters emerging, in order to improve and facilitate the efficiency of the banking sector. These include structural readjustment, reducing of unprofitable assets of the sector, introduction of deposit insurance system, refinancing normally operating banks to help ease capital deficiency issue and encouraging ways to issue new loans. As a measure to ability of banks to bear risks, the BOM increased the recommended capital requirement ratio to 12%, in March 2009. Also opportunity was given to banks to use from their risk funds that were set up when economy was stable and banking profitability had been relatively high and required amount to set up risk fund has been reduced given the financial crisis as a factor. Central bank has approved a practice to extend loan repayment period by two times, a move likely to open up flexibility between private sector borrowers which are going through operational difficulties and lenders to negotiate loan payments. Also the BOM has advised banks to take a soft approach and readjust loan payment terms in dealing with borrowers failing on loan payment for temporary period.

The BOM has put a substantial effort in developing primary and derivative housing funding markets. With a general guideline of issuing primary Ipotec loans passed,

An act to regulate Ipotec loan ratio “Real estate as collateral act” is being drafted by representative of the BOM and a bill will be submitted at the 2009 spring assembly of the House of Parliament to be legalized. Parliament debate to determine whether to spend 4.8 billion euro fund injected by the Reconstruction and Development bank of Germany in financing mortgage market or not is being undertaken. In addition, to finance mortgage market 25 billion tugs have been raised through an issuance of Mongolia Ipotec Corporation bond.

5.2 Banking regulation

The BOM is giving more importance to the serial distance monitoring and has been bolstering its special auditing and supervisory bank visits with aim to tackle violation and breach of financial regulations. Financial supervising of banks with special audit taking place once in every year, necessary enforcement set out in accordance with the financial regulation has been taken on banks which have failed to improve their role in complying with regulations. Moreover, financial disciplinary actions have been taken on repeated occasions. In addition, as a measure to improve the supervisory role of the Central bank in terms of auditing content, scope and strength, a number of trainings have been given to the bank supervisors with aim to increase their skill and knowledge capacity and the bank is also hiring new auditors.

In order to retain banking sector's stability and vigorously guarding depositors' fund in time of financial crisis, the BOM has brokered a co-operation deal with donor organization to set out a package of measures directed at above agendas. These include by the beginning of 30th June, 2009, financed by the World Bank, respected western auditing firms are requested to carry out complete auditing in Mongolian banks in order to find out whether rate of bad debts during the crisis, and liabilities beyond the balance sheet are true, complete and recorded independently or not. After the auditing is complete, the BOM is planning, based on the audit reports, to calculate a level of deficiency of its capital reserve by determining the real scope of bad debts and thus seeking direct investment from international institutions for equity funds of banks with significant roles in the system.

Conclusion

Asset prices have increased significantly over recent years. Due to economic monetization process and capital inflow increase, economic agents tended to increase their demand for durable goods and were interested to store their wealth not only in deposit, but also in other high revenue assets. The result of simple analysis indicates that housing price has been mainly driven by liquidity and real economic activity and another interesting result is a negative correlation between house price and domestic currency loan rate. Loan rate lies ahead one quarter or explained by a house price movement. The stock price movement is highly and positively correlated with broad money and real economy growth. But increasing stock price tends to affect inflation and GDP gap positively and loan interest rate negatively. From this result we can conclude that economic agents make decision to store their wealth depending on their liquidity condition. Moreover, result shows that economic agents mostly are not interested in holding their wealth as foreign exchange, because of too volatile exchange rate. This relationship is also proved by principle component analysis. From the indicators that show soundness of financial sector, banking sector vulnerability is weakening over time. But we can't say that it is just because of construction sector downturn due to sharp decrease of housing prices. However, construction company's loans are worsening related with reason mentioned above, banking sector faced liquidity problem due to exchange rate depreciation. In the time that exchange rate movement stabilized, banking problem still continued due to economy downturn.

The following policies could be recommended for implementation to avoid the adverse impact of asset price in banking sector. To enhance bank supervision and institutional improvements arc the best responses to an asset price bubble episode. Implement dynamic provisioning measures to deal with pro-cyclicality in banking sector. Sometimes, it becomes the best way to avoid asset price bubble especially in the economy that a bank dominates in financial intermediation. To support demand side of construction sector is one way to avoid shift construction sector problem to banking sector soundness in the short run. In the long run, policy makers should consider inflation pressure after crisis and implement suitable policy.

Data summary :

1. "The statistical book of Mongolia " 2000 year
2. "The statistical book of Mongolia " 2001year
3. "The statistical book of Mongolia " 2002 year
4. "The statistical book of Mongolia " 2003 year
5. "The statistical book of Mongolia " 2004 year
6. "The statistical book of Mongolia " 2005 year
7. "The statistical book of Mongolia " 2006year
8. "The statistical book of Mongolia " 2007 year
9. "The statistical book of Mongolia " 2008 year
10. "The statistical book of Mongolia " 2009year
11. "The statistical book of Mongolia " 2000 year
12. " The Bank of Mongolia " 2000 year By.Byantogtokh
13. "Banking system" by B.Baldorj 2006.year
14. "Sanhuugiin Zohistuulah Horoo" 2008 year
15. "The banking systems management " by lyvsandorjin Ouyn 2006.ub city

16. “The Finance research” By Professor D.Sterenpil 2006 year
17. “The Case Banking systems “D.P. Uting 1996 year, Moscow
18. “The Banking Laws” By Micro Finance Development Fund, 2008 Year
19. “Asset Prices and Monetary Policy, In Bank for International Settlements, Asset Prices and Monetary Policy : Four views .Basle : BIS
20. Yamguchi. Yutaka : Asset Price and Monetary Policy in New Challenges for Monetary Policy .Kansas city, Federal Reserve Bank of Kansas City
21. Okina, Kunio, Masaaki Shirakawa, Paul van den Noord and Christophe Andre（2006）
Resent House Price Developments : The Role of Fundamentals, Economic Department Working Papers No.475
22. Yongheng Deng, Roger Moon, Yanyu Wu（2008 Year）: An Empirical Analysis of Housing Price Dynamic with Factors, November 16. 2008West, Kenneth D.（1997 year） A Specification Test For Speculative Bubbles, Quarterly Journal of Economic, August