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China's Monetary Policy Regime

Abstract: With China's economic reform and opening, People's Bank of China (PBOC) started its own reform. Up to now, PBOC has experienced five stages of its evolution: exploration stage (1978-1992), developing stage (1992-1997), reform stage (1998-2001), relatively mature stage (2001-2009), reform deepening stage (2009- now). Multi-targets decision has been a typical model of China's monetary policy regime. PBOC will keep multi-targeting decision model in the future. Although China's money policy has made relatively good performance during the last two decades, PBOC still faces some big challenges. With respect to macroeconomic policy trilemma, China's government chooses a combination of independent monetary policy, fixed exchange rate system (the "crawling peg" since 2005 was similar to fixed exchange rate) and controls on capital account, thereby resulting in over-accumulation of official foreign reserves, and to some extent, impairing the independence of China's monetary policy. In the context of RMB internationalization, the capital control also made RMB less attractive to foreign investors. In fact, one of the main purposes that PBOC dedicates itself to promoting RMB internationalization is to force capital account opening, which would also stimulate the liberalization of exchange rate and interest rate at the same time. It is a political wisdom which is called 'reversed transmission mechanism' and was once successfully employed in China's entry of WTO.

Key Words: monetary policy regime, financial reform, internationalization of RMB

1. The Brief History of China's Monetary Policy Regime

1.1 Exploration stage: 1978-1992

The People's Bank of China (PBOC) was separated from Ministry of Finance(MOF) in 1978. However, from 1978 to 1983, China's monetary policy regime was almost a non-isolated system, which was more similar to the "cashier" of MOF. In fact, PBOC was not a real central bank, but a combination of central bank and commercial bank, or, in other words, it acted as the referee and athlete at the same time, which prevented it from the function of manage the money supply. More importantly, no matter in terms of the objects or the tools of the monetary policy, PBOC was almost under the thumb of MOF's fiscal plans, which made PBOC a "cashier of MOF".

It was not until 1984 that PBOC began to function as a real central bank and set up the required reserve system. After that, China has its monetary policy in any meaningful sense. And the centralized planning system was replaced by a macro-management system. At this stage, PBOC began to use indirect monetary policy tools, but the direct credit management remained the primary policy tools of PBOC. What's more, it was notable that credit scale management was not decided by PBOC, who was only an adviser instead of decider. The State Council called the shots.

1.2 Developing stage: 1992-1997

After Deng Xiaoping's South Tour Speech in 1992, China stepped up its market-oriented reform. The pent-up domestic demands of consumption and investment were unleashed. The money supply was out of control and the inflation rose sharply to nearly 20%, which threatened the financial stability seriously. In face of the great danger, Premier Zhu acted decisively to restore the financial order and improve the monetary policy system. A lot of measures were taken to strengthen PBOC's ability of macro management. However, as the socialist market economy system was just established, the monetary policy was constrained by a lot of political factor, which underscores many structural flaws.

①Strengthen the indirect management of money supply, but direct intervention was still the primary method.

In November 1993, The CPC central committee issued the Decisions on Several Issues

Concerning the Establishment Of Socialist Market Economy, which explicitly pointed out that “PBOC, as China’s central bank, implements monetary policies under the leadership of the State Council. It’s committed to switch the management model from credit scale management to using indirect tools, including required reserve ratio, benchmark interest rates and open market operation, to control the money supply in order to keep the stability of exchange rate.” By then, China defined the function of central bank, the objectives and tools of monetary policy.

However, the direct intervention based on credit scale management is still the primary method of monetary policy. In the 3rd quarter of 1994, PBOC began to publish the money supply indicators. In 1995, relevant legislation was passed to set the money supply as the most important objectives. In 1996, PBOC began to publish M0, M1 and M2 monthly. The liquidity management system has basically taken shape.

② Attempts to interest rate liberalization

In 1996, the interest rate liberalization was started with initial experimentation. At this stage, PBOC focused on the interest rates in money market and bond market, leaving the deposit and lending rates untouched. China has always advocated this kind of an incremental approach to reform instead of “big bangs” or “shock therapy”, which is consistent with China’s cultural tradition and throughout all the reforms in China.

In June 1996, China established its money market and liberalized the interbank offered rates. In June 1997, the inter-bank bond market was set up and the inter-bank bond repo rate was liberalized. However, it turned out that the policies appeared more symbolic than practical when the infrastructure was still underdeveloped. China’s monetary policy still depended on the direct intervention through quantity channel instead of indirect management through price channel.

③ Reform the RMB exchange rate regime, but more symbolic than practical

With the development of opening-up strategy, the reform of RMB exchange rate regime was on the agenda. From 1978 to 1993, China actually maintained a fixed exchange rate. And there existed a dual exchange rate system (the official price and market price), which often led to market turmoil. In 1994, PBOC started to reform the old two-track system and announced the establishment of “the unitary and well-managed floating exchange rate system based on market supply and demand”. In principle, PBOC set a target range of RMB exchange rate and keep the currency value stable through market operation. After the 1994 reform, foreign exchange reserves became the primary channels of money supply. China’s foreign exchange reserves increased rapidly from 1994-1997. After that, the

rapid growth started to slow down during the Asian Financial Crisis.

In spite of the announcement to establish well-managed floating exchange rate system, China's policymakers actually prefer to keep RMB artificially low, which could enhance the country's export competitiveness. Furthermore, with capital account unopened, PBOC was able to manipulate the currency value through direct intervention in foreign exchange market. From 1994 to the second reform of exchange rate system in 2005, RMB only appreciated by 4% in spite of large current account surplus. Especially after the Asian Financial Crisis, China almost kept the RMB exchange rate fixed (Figure 1). In this context, PBOC felt it difficult to manage the foreign exchange reserve, which was an important source of money supply.

1.3 Reform stage: 1998-2001

Since the emergence of Asian Financial Crisis, China has dramatically speeded up the reform monetary policy regime.

① Abolish the limit on credit size

In 1998, PBOC abolished the limits on credit size and stopped giving lending instructions to banks, which marked that China's monetary policy had almost completed the transition from direct intervention to indirect management. Many researchers argued that the transition was of greatest significance in the history of China's monetary policy. Because it means that China dropped the primary policy tools that used for more than half a century. However, the transition is not thoroughly completed. Because interest rate liberalization was not completed and the quantity tools still mattered more than price tools.

② Attempts to reform the interest rate system

Although interest rate is not completely liberalized, the reform of interest rate system still made some progress.

Firstly, PBOC began to conduct macro-management with interest rate in a more flexible way. In the single year after Asian Financial Crisis, PBOC cut the rates for four times. Secondly, extend the floating range of interest rate. Thirdly, reform discount and rediscount mechanism and liberalize the discount rate. Fourthly, promote the liberalization in money market and bond market. In September 1998, the policy-type financial bond rate was liberalized.

③ Develop money market and open market operation.

PBOC began to develop open market operation. The most important step was to develop money market, especially bond market.

First, strengthen the infrastructure. The main measures included: unifying the

interbank market, absorbing qualified security companies and fund management companies into interbank market, trying to cultivate market demand. And the government stopped apportioning to policy banks and allowed them to issue policy-type financial bond in a market way. They also try to lower the cost of bond issues, thus provided the conditions for PBOC's open market operation.

Driven by these supportive measures, interbank bond market developed rapidly. The market size more than doubled in the year after 1998. With the development of money market, open market operation, which was almost in blank before 1998, had generally taken shape in 1999. The money supplied through PBOC's open market operation accounted for 52% of the base money in 1999.

However, the foreign exchange purchase made up most of the open market operation. What's worse, because the state-own banks was reluctant to sell the treasury bond, leading to the lack of transactions in interbank market, PBOC's open market operation had few effects on money supply.

④ **Impose “window guidance” on commercial banks**

In China, the “Big Four”, including Industrial and Commercial Bank of China (ICBC), Agriculture Bank of China (ABC), Construction Bank of China (CCB) and Bank of China (BOC) accounted for more than 80% of the gross asset of China's bank sector. Before the 21st century, nearly 70% of the loans was controlled by the Big Four. Thus, whether PBOC's monetary policy could affect the economy heavily depended on the behavior of the Big Four. Unfortunately, the Big Four hadn't established the advanced governance structure and incentive system. Thus, they may not be eager to look for new borrowers when they have plenty of deposit, especially when the credit risk was high due to the financial crisis. In some sense, China's nonmarket-based environment leads to nonmarket-based policy tools. In order to solve the problems mentioned above, the government tried to look for a more balanced way, which could keep away bureaucratic fiat but still keep the banks in control. Against the background, “window guidance” came into being.

In March 1998, PBOC started to regularly hold analysis meetings of economic and financial situation, where PBOC provided guidance to the banks. On the one hand, PBOC will make monetary policy according to the banks' feedback. On the other hand, the “window guidance” actually was mandatory even though it hadn't been written into laws. So it played an important role in China's monetary policy regime.

1.4 Relatively mature stage: 2001-2009

After entering WTO in 2001, China's economy saw new opportunities and China

stepped up to integrate with the global production system, which presented new requirements and conditions for the reform of monetary policy regime.

① **The new channel of money supply: forex purchase**

Before 2001, PBOC conducted the open market operation by reverse purchase of treasury bond in interbank market. The object of money supply was banks instead of enterprises. The commercial banks is reluctant to lend in face of the capital requirement and limit on non-performing loans. Thus, the base money supplied by PBOC tended to become the excess reserve of commercial banks and the real economy might suffer from liquidity shortage.

In 2001, PBOC began to increase money supply through forex purchase, which marked a turning point in the history of China's monetary policy regime. By this way, PBOC could easily provide liquidity to the economic entity, which could directly increase money supply. China's policy makers turned out to be underprepared for the transition. In the following years, China's inflation experienced significant fluctuations.

② **New policy tool: central bank bill**

With the shifting model of money supply, China's policymakers tried to look for new tools to manage the liquidity. In April 2003, they even created a new financial instrument: "central bank bill" (also known as yangpiao). The maturity of which differs with common treasury bond and could be as short as 3 months.

Before 2007, PBOC used the central bank bill to take back the excess liquidity. After 2007, its function changed significantly. PBOC started to use it to guide market expectation.

③ **Further progress in interest rate liberalization**

The government made a clear roadmap for market liberalization: first, liberalize the rates in money market and bond market, then lending rate, eventually deposit rate. At this stage, the reform was focused on lending rate and deposit rate.

In January 2004, PBOC raised the lending rate ceiling and floor at the same time. In October 2004, PBOC abolished the lending rate ceiling and deposit rate floor in order to enable the banks to price according to the market. However, the lending rate floor and deposit rate ceiling were still kept.

Despite the significant progress, it was still a long haul to enable China's interest rates to reflect the real financing cost. With the stagnation of interest rate reform since 2004, the inconsistency between official and market rates has been more and more significant, which underscored the need to further reform.

④ Restart the reform of exchange rate regime

China's exchange rate regime turned into a fixed exchange rate system after the first reform of exchange rate regime in 1994. The value of RMB kept stable due to the strict capital control and market intervention by PBOC. The undervalued RMB played an important role in promoting economic growth, but significantly undermined the effectiveness of monetary policy. With the further opening of China's markets, it's inevitable to switch from fixed to floating exchange rate regime.

Against this background, China started the second reform of exchange rate regime in 2005. The new goal was to establish "a managed floating exchange rate regime based on market supply and demand with reference to a basket of currencies". After that, RMB entered the appreciation cycle, which played an important role in the rapid forex accumulation.

1.5 Reform deepening stage: 2009- now

In 2008, the greatest financial crisis since the Great Depression hit the global economy, which significantly accelerated the rise of emerging market countries. In 2010, China replaced Japan as the second largest economy. But China's financial and monetary system was still underdeveloped and relatively closed, which was inconsistent with China's rising power. Most importantly, RMB was not an international currency, which made China's economy enslaved to US dollar. In order to solve the problem, China's policy makers felt it necessary to promote the liberalization of financial system and the internationalization of monetary system.

① Liberalization of Interest Rate

Given the potential risk, the government took a relatively conservative position towards the liberalization of financial system, which almost centered on the liberalization of interest rate. On the one hand, the PBOC cut the banking loan and deposit rates for several times during the crisis. The interest rates were more and more used for macro-management and the benchmark interest rate was more and more rational. On the other hand, the PBOC caught the opportunity of reforming the interest rate system. In June 2012, the PBOC adjusted the upper limit of deposit rate to 1.1 times as benchmark rate and the lower limit of lending rate to 0.8 times as benchmark rate, which gave the commercial banks greater space to price the funds. Before that, the deposit rate was completely determined by the PBOC and the commercial banks weren't allowed to adjust the deposit rate, which was widely accused of blocking the rational pricing of the private capital. Since then, both the lending rate and deposit rate were allowed to float and a new era had begun.

②Internationalization of RMB

As we discussed above, the time appeared ripe for the internationalization of RMB as the demand for RMB increased sharply during the crisis when the value of major currencies fluctuated significantly. For this reason, the government took more measures for RMB internationalization (it's interesting that RMB internationalization never appeared in China's official documents, but all the government's action pointed to this strategy).

It is widely acknowledged that an open capital account is the premise of currency internationalization. Under the circumstances of capital control, China's government can only rely on the indirect means.

A. Promote cross-border RMB trade settlement

In order to facilitate international trade and investment for China's enterprises, the government began to make experiments of cross-border RMB trade settlement in five cities such as Shanghai in 2009, then extended to 20 provinces in 2010. At the same time, the partner country extended from ASEAN to all countries. In 2011, the experiments extended to all the provinces in China.

B. Develop bilateral currency swap

China began to promote bilateral currency cooperation with surrounding countries in 2008. So far, China has signed bilateral currency swap arrangement with 18 countries, amounting to 1.67 trillion yuan. Through the currency swap arrangement, RMB is able to enter these partner countries' financial system, which helps improve the efficiency of yuan settlement.

Table1: The Bilateral Currency Swap Arrangement Between China and Other Countries

Date	Partner	Swap Value (billion, RMB)
2008.12.12	Korea	180
2009.2.8	Malaysia	80
2009.3.11	Belarus	20
2009.3.23	Indonesia	100
2009.4.2	Argentina	70
2010.6.9	Iceland	3.5
2010.7.23	Singapore	150
2011.4.18	New Zealand	25
2011.4.19	Uzbekistan	0.7
2011.5.6	Mongolia	5
2011.6.13	Kazakhstan	7
2009.1.20	Hong Kong	200
2011.10.26	Korea	360
2011.11.22	Hong Kong	400
2011.12.22	Thailand	70

2011.12.23	Pakistan	10
2012.1.17	The united Arab emiratesk	35
2012.2.8	Malaysia	180
2012.2.21	Turkey	10
2012.3.20	Mongolia	10
2012.3.22	Aurstrilia	200
2012.6.26	Ukraine	15

Source: PBOC

C. Develop RMB settlement business under the capital account

PBOC began to make experiments of RMB settlement business relating to overseas direct investment in 2010. The domestic private investor were allowed to use RMB to make overseas direct investment and the foreign investors were allowed to use RMB to make foreign direct investment in 2011. The RMB settlement amount in ODI and FDI reached 20.15 billion and 90.72 billion, respectively.

D. Develop Hong Kong offshore RMB market

The value of RMB kept in Hong Kong market increased sharply from less than 56 billion yuan in 2008 to more than 650 billion in 2011, most of which came from the cross-border yuan trade settlement activities of domestic enterprises. As of 2011, RMB deposit accounted for 10% of total deposit in Hong Kong's banks, only less than HK dollar and US dollar. At the same time, the number of financial institutions that conducted RMB business also increased from 40 to 132.

③ Further reform of the exchange rate regime

The global financial crisis underscored the flaws of China's exchange rate regime. A lot of scholars advised to liberalize the exchange rate regime. In June 2010, PBOC announced the decision to improve exchange rate system and increase the flexibility of the exchange rate.

The measures included further developing currency market, introducing OTC transactions and market maker system, developing inter-bank market of RMB forward, swap and option, introducing new hedge tools, promoting the overseas investment and relaxing the restrictions on forex holding.

④ Financial Opening and Innovation in Qianhai Special District

Shenzhen Qianhai government has made great efforts to build Qianhai Special Financial District, which has become the bridgehead of the RMB internationalization and capital account opening. Up to now, some reform measures which could be revealed include: a) allow bidirectional RMB loans between the mainland China and Hong Kong,

with which RMB in Hong Kong could invest in mainland by means of bank loans. b) cooperate with Hong Kong to develop capital market, including developing bidirectional cross-border ETF transactions with RMB. By this way, the RMB holders in Hong Kong are able to invest in mainland derivative market and the investors in mainland find a way to buy ETFs in Hong Kong market. All these measures were conducive to the RMB internationalization and capital account opening.

2. Monetary Policy Targets in China

Since real central bank's function was created in the PBOC in 1984, multi-targets decision has been a typical model of China's monetary policy regime. Just like an official of PBOC said in 2000, 'It is rare for a central bank in the world to undertake so many tasks, such as inflation control, employment incentive, economic growth, collaboration with the fiscal policy to expand domestic demand, guarantee of the increase of foreign reserve^①, stability of exchange rate. But China's central government does ask its central bank to achieve all of these goals.'

In 1995, China issued the Law on the People's Bank of China, declaring that 'the target of monetary policy is to keep RMB's value stable, thereby promoting the economic growth.' This is the first time for PBOC to set up the single targeting model. But the argument about the single targeting model in China was always sharp. The reason why the law could be issued in 1995 is that China just experienced high inflation during 1993-1994. In fact, central bank quickly transferred its inflation targeting to growth targeting after 1997 as the inflation became negative in 1997. Up to now, the central bank has been actually making multi-targets decision.

Although quite a few economists, whatever Chinese or foreigners, believe that monetary policy cannot achieve multi-targets at all, China's central bank has pursued this model for a long time. The one reason is that PBOC is not an independent department. Another reason is, as an emerging economy, China's economic growth during the last three decades was so rapid that our government had to handle lots of unexpected problems while the monetary policy regime was still a planning system to a large extent. And maybe there is a third reason. China's traditional culture admires a comprehensive perspective to deal with comprehensive problems. Many Chinese officials and economists don't believe that a central bank, as a large department, should only undertake single task. They argue that the central government should conduct multiple policies (just like combine fiscal policy,

^① In the 1990s, China did not accumulate enough foreign reserves. So it was important for PBOC to ensure the increase of foreign reserves.

monetary policy and other policies) to achieve multiple targets.

Both US financial crisis and euro zone crisis clearly show that a central bank has to play a lender of last resort in a serious crisis. Even in a normal status of a financial market, most of countries now believe that a central bank should be responsible for financial stability, which means a central bank has at least dual targets. In an era of financial deepening and globalization, a central bank cannot meet the requirement of good economic governance only by inflation targeting. It is definite that monetary policy will have comprehensive responsibilities in the future, although it is difficult to do so.

Under such circumstances, PBOC will keep multi-targeting decision model in the future. In fact, after global financial crisis, responsibilities of PBOC could be generalized as four items: economic growth, inflation control, financial stability and internationalization of RMB. The fourth target is a new one. It is the last, but not the least. Some people consider the stability of exchange rate is a key target of China's central bank. It is right, but the real concern of PBOC for exchange rate is economic growth.

Almost everyone in PBOC admits that a central bank cannot achieve so many goals at the same time. For PBOC, the key job is to make a discretionary policy so that it can meet the most important or most urgent need of the central government. At certain period, PBOC has to spur domestic demand to combat depression, just like in 1997 and 1998, 2008 and 2009. And at another time PBOC is busy in controlling inflation, just like in 2011. So the real implication of multi-targeting decision model is that PBOC switches its core target from time to time. If some targets conflict with each other at a certain time, such as inflation control and economic growth, PBOC always choose growth targeting. To a large extent, growth targeting is suitable for China in the past as it is a developing country.

Besides four targets mentioned above, PBOC actually undertakes a very important mission: financial reform and opening. China had real monetary policy until 1984 and since then PBOC has tried its best to transfer the former planning system to a marketing system. So, comparing with advanced economies, China's central bank has to deal with far more problems. In the last three decades, China succeeded in reforming and opening its real economy. But in the financial market, there are still a lot of works to do. Recently, interest rate liberalization, entry of private capital to financial industry and capital account opening begin to accelerate. Since the global economic situation is not good, and transition of domestic development pattern is in the hard period, PBOC will definitely face big challenge. For sure, PBOC will stick to multi-targeting decision model. But how could PBOC make a trade-off if growth objective conflicts to others? We don't know exactly. In my view, the

most important goal for PBOC is to firmly and thoroughly make financial marketization reform and opening, which is the mere guarantee of sustainable economic development. In other words, reform targeting should be a priority for PBOC.

3. Monetary Policy Transmission Mechanism

Nowadays, with financial deepening and globalization, monetary policy transmission mechanism is becoming more effective and plentiful in China. Open market operation, deposit reserve ratio, rediscount, the RMB counterpart of foreign exchange reserves, interest rate and PBOC's suggestion constitute a main transmission mechanism in China.

Since there is interest rate control, the most effective method to adjust money supply is open market operation and deposit reserve ratio in China. During the recent years, under crawling-peg exchange rate system, excessive current account surplus with capital inflow, forced PBOC to generate a large amount of RMB counterparts of foreign exchange reserves. PBOC had to employ sterilized intervention, including open market operation and deposit reserve ratio, to stabilize monetary base. Many years' practice shows the sterilized intervention is effective, indicating the above transmission mechanism works well.

PBOC's suggestion is also an effective tool to carry out its monetary policy. Just because of PBOC's suggestion, Chinese commercial banks are actively engaged in the business of cross-border RMB trade settlement, which makes a great contribution to the fast development of internationalization of RMB. And also because of PBOC's suggestion, all commercial banks set a quota of loans for small and tiny companies, which greatly promoted the loans for these companies in 2011. Many foreign economists and bankers argue governmental suggestion and guidance to commercial banks is a non-market approach and it is very risky because the ratio of non-performing loans will rise. But the situation in China is special. Most commercial banks in China are stately controlled and they have strong intention to issue loans to state-owned companies because it is a 'politically correct' decision. Although many small companies (for sure they are private companies) are running very well, they could hardly get any loan from banks. Owing to the suggestion made by PBOC, well-performing private companies get loans and at the same time the banks get profits from these deals.

Anyway, planning-style monetary tools are not a suitable way to encourage sustainable economic development in the long term. With financial deepening, PBOC will employ less and less planning approaches.

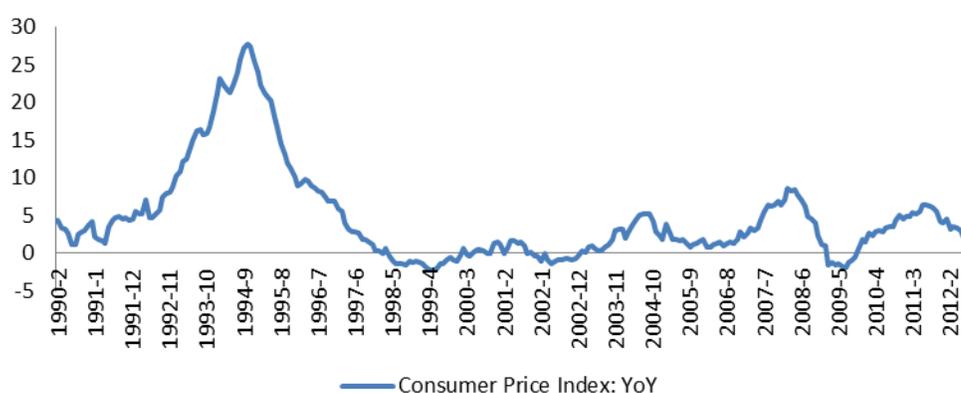
4. The Achievements of China's Monetary Policy

4.1 Policy achievements before the 2008-2009 crisis.

① Increasing capacity to cope with inflation

In the late 1980s, China's monetary policy went through the first test as inflation went high. After the second half of 1989, PBOC began to tighten the monetary policy significantly. In order to control the credit growth, PBOC even returned to mandatory plans on credit scale and created some special deposit. It was no surprise that the suddenly tightened policy produced immediate effects. China saw a period of low inflation from 1990 to 1992. However, such a policy brake turned out to be palliative and the overheating of economic fundamentals went on. Without the support of structure reforms and the improvement of economic fundamentals, the inflation risk might flare up again.

Figure 1 CPI: 1990-2012



Source: CEIC

The development in the following years confirmed our fears. After 1992, the inflation rate increased sharply and hit record high, which was almost 30%. There were many reasons for this, most important of which was that the turmoil of financial system. The market liquidity was out of control because of the imperfect monitor system, resulting in over-investment in real estate and stock market. Against that background, PBOC continued to keep tight policy, but it turned out to be ineffective as the high inflation lasted for nearly three years.

The policymakers came to realize that it's much more important to reform the macro-management of liquidity than taking measures under the old framework. Thanks to the accelerating reforms, the inflation started to fall in 1994 and came back to normal in 1996.

After that, the government's ability to manage inflation was improved significantly and the inflation in China has been kept moderate for a long time, which strongly outperformed the other emerging market countries such as India and Russia.

② Successful responses to Asian Financial Crisis

When the Asian Financial Crisis hit, there were two important tasks for the government at that time.

First, as the export and domestic demand began to decrease sharply in 1998, the policymakers must expand money supply, which heavily relied on increasing bank lending, to promote economic recovery. However, under the restriction of non-performance loans, most of the commercial banks were reluctant to lend. So the government must take measures to increase banks' willingness to lend money to private sectors.

Second, the competitive currency devaluations in some Asian countries put great pressure on RMB exchange rate and China's export. If not properly managed, RMB exchange rate might fall sharply and led to significant chaos of the monetary system and financial market.

Given the domestic and foreign environment, China's government took a variety of measures to loosen money supply and keep strict control of capital account to maintain a fixed exchange rate of RMB. By this way, China succeeded to overcome the crisis and bring the inflation and economic growth back to normal. Most notably, the economic growth was maintained at a high level even during the crisis (7.6% in 1998 and 1999).

4.2 Policy achievements since the 2008-2009 crisis.

① Ensure adequate liquidity to spur economic growth

When Lehman Brothers went bankruptcy and the financial crisis escalate rapidly in September 15th, 2008, China's monetary policy switched from 'prudent' into 'moderately loose' at once. After that, the PBOC took a series of actions to provide enough liquidity.

Provide liquidity through open market operation. In July 2008, the PBOC began to slow the pace of bond and bill issues in order to ensure adequate liquidity in the market. At the same time, PBOC increasingly used the short-term bills instead of long-term bonds, which was more flexible and could help enhance the flexibility of monetary policy and the resilience of China's financial system to liquidity shocks. As the economic conditions improved, PBOC restarted to issue bonds with a maturity more than one year, in order to keep money supply in control. In addition, PBOC created Term Auction Facility (TAF) to provide adequate resources to the troubled financial institutions.

Cut benchmark lending and deposit rates. The PBOC cut the benchmark lending and

deposit rates on September 16th, one day after Lehman's bankruptcy. In the following months, the interest rates were cut for five times, reaching historic lows of 2.25% for deposit and 5.4% for loans, which helped lower the financing cost and increase money supply. In October 2010, PBOC restarted to raise the rates for the fear of over-supply of money.

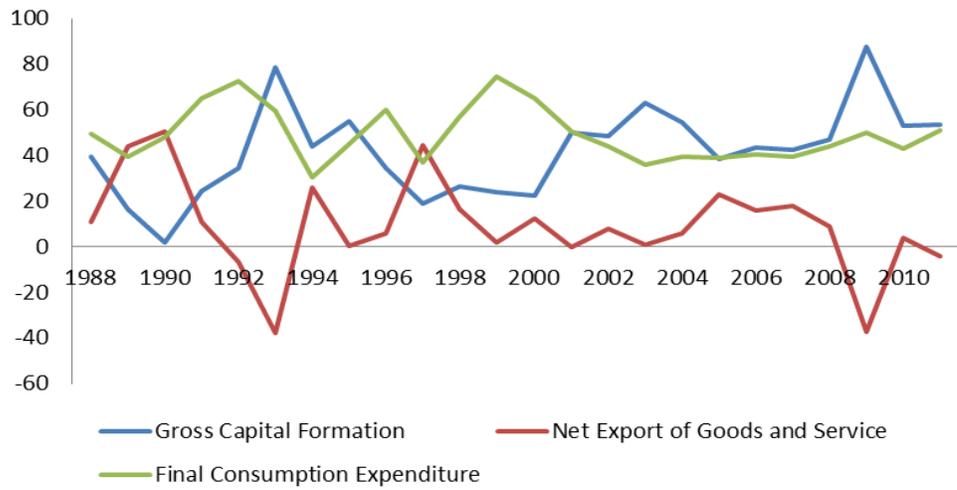
Cut the required reserve ratio. The PBOC cut the required reserve ratio of commercial banks for four times from 17.5% on September 25th, 2008 to 13.5% at the end of 2009. As the money supply increased so rapidly, PBOC began to raise the required reserve ratio since January 2010.

Abolish the credit limit on commercial banks. PBOC intended to increase the flexibility of credit market and thus provide the private sector with adequate funds. However, due to the waning risk appetite during the crisis, the banks' unwillingness to lend still hampered the credit market significantly.

All these measures contributed to ensure the sufficient liquidity provision. After several cuts of benchmark interest rates and required reserve ratio, M2 grew by 17.8% in 2008, 29.7% in 2009 and 19.7% in 2010. So there was no doubt that China's monetary policy was quite aggressive since the crisis, especially the credit market policy, which certainly had a significant impact on supporting economic growth.

Due to the positive monetary policy and fiscal policy, China's economy maintained a high growth during the crisis. In November 2008, the State Council put forward a stimulus package which amounts to 4 trillion yuan. At the same time, the PBOC reduced the financing cost and encouraged banks to lend through "window guidance". All these projects could never work without the support of monetary policy.

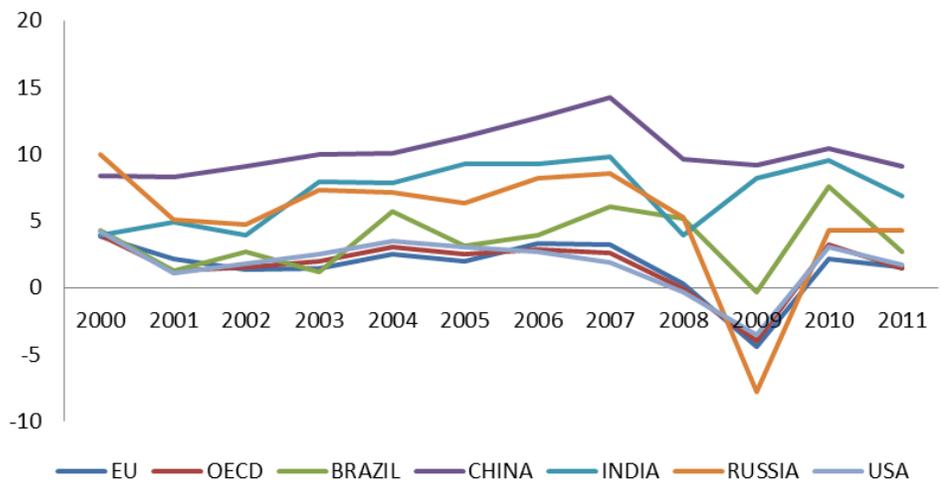
Figure 2 Contribution to GDP Growth



Source: CEIC

Driven by the rapid growth of bank loans, the investment in infrastructure projects such as transportation increased sharply, which stimulate the demand for productive materials such as iron and steel. The contribution to GDP growth by gross capital formation increased from 46.9% in 2009, hit the record high. As shown by the following figure, when the export market deteriorated sharply and private consumption remained weak, the economic recovery had no choice but relying on the investment demand.

Figure 3 GDP Growth of Major Countries (year on year)



Source: CEIC

The strong demand for investment led to a strong rebound of China's economic growth. The four seasons' decline of GDP growth rate, from 11.3% in the 1st quarter of 2008 to 6.5% in the 1st quarter of 2009, came to an end in the 2nd quarter of 2009. And the economy grew by 8.9% in 2009, outperforming the government's target of 8%. The economic growth in the following two years also reached 10.8% in 2010 and 9.2% in 2011. As shown in the figure below, China's economic growth did best during the crisis when both other developing countries and developed countries all experienced a sharp decline in 2009 and 2010.

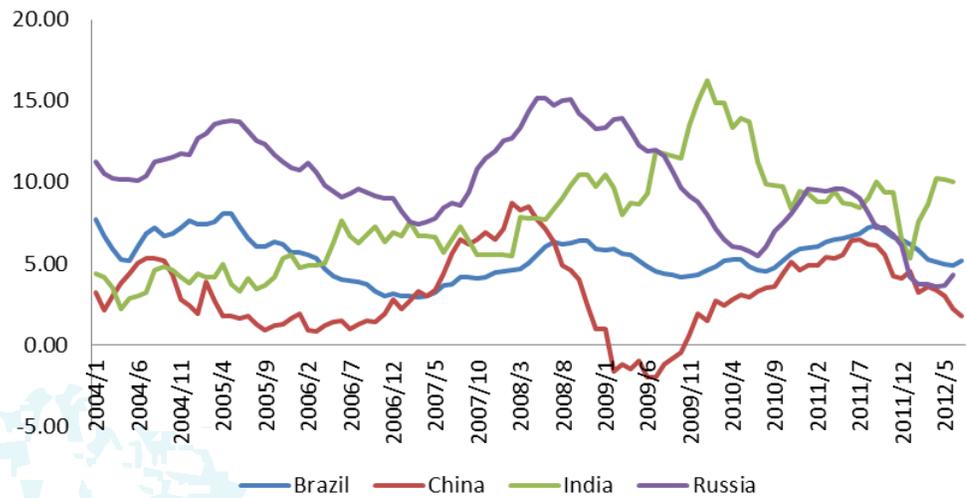
② Control the inflation

Compared with the other emerging market countries, China's management of inflation during the crisis seemed to be more successful.

In 2007, as the subprime mortgage crisis worsened, China's external environment changed significantly. However, the domestic economic fundamental seemed to be very strong, even showing some upwards risk. After the rapid growth in the last 7 years, the inflation was poised to go high again. In face of the difference between internal and external conditions, the government put the inflation risk in the first place and took timely and effective measures to contain the inflation. The prudent policy that lasted for 7 years was replaced by tight policy in the second half of 2007, which immediately lowered the inflation in the following months.

After Lehman's bankruptcy, the further deterioration of the global demand caused significant deflation risk. And the PBOC immediately switched the monetary policies into "accommodative", which not only defeat the deflation risk and but also avoided the high inflation rate like the other emerging market countries. Compared with other BRIC countries, Brazil in particular, China's inflation rate seemed to be much more stable. Although China's inflation was significantly affected by the global market just like the other emerging countries, the PBOC's hand was not weakened so much and succeeded to contain the external shock.

Figure 4 Inflation Rate of BRIC



Source: CEIC

③ Limit real estate price

The incredible magnitude of banking loans not only stimulated the real economy but also caused upward pressure on the real estate price. The real estate price fell sharply in 2008 and the first half of 2009, then began to boom under the expansionary monetary policy in the late 2009 and reached the highest in 2010.

Against that background, the government began to push down the price through direct interventions. The major step was to increase the financing cost of home-purchase and tighten credit on real estate market. Moreover, the government imposed many purchasing restrictions on residential real estate. All these measures contributed to prevent the price from excessive increase.

Although the government stopped releasing the data of real estate price after 2010, we could still saw the significant reverse of the real estate price. Overall, the timely policy responses had a positive impact on the real estate market.

Figure 5 Real Estate Price Index and M2



Source: CEIC

④ Improve national welfare

The special monetary policy regime with Chinese characteristics brought out the superiority in the special period. By the extensive intervention, the PBOC made a significant contribution to the national welfare.

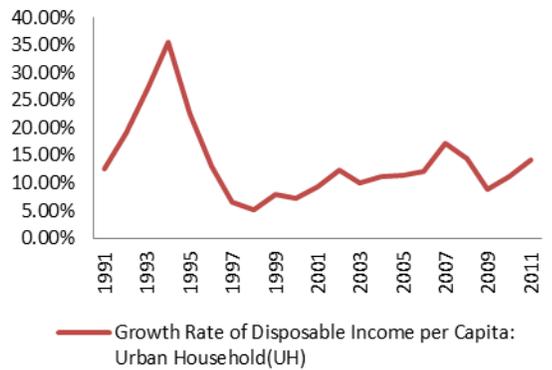
Livelihood projects. The PBOC instructed the banks to lend to some important livelihood projects such as health care, education and social security. For example, 12.6 billion yuan of new bank loans were channeled to finance the affordable housing projects, which contributed to alleviate the housing problems.

Figure 6 Unemployment Rate



Source: CEIC

Figure7 Disposable Income



Source: CEIC

Supporting small and tiny firms. The PBOC also focused on increase lending to the small and tiny firms, and thereby stimulate the employment. Under the PBOC's guidance, the commercial banks did lend more to small and tiny firms than usual. However, due to the risk aversion of the banks, about 73% of the loans were got by the large state-owned enterprises, which led many small firms into trouble and a lot of them went bankruptcy.

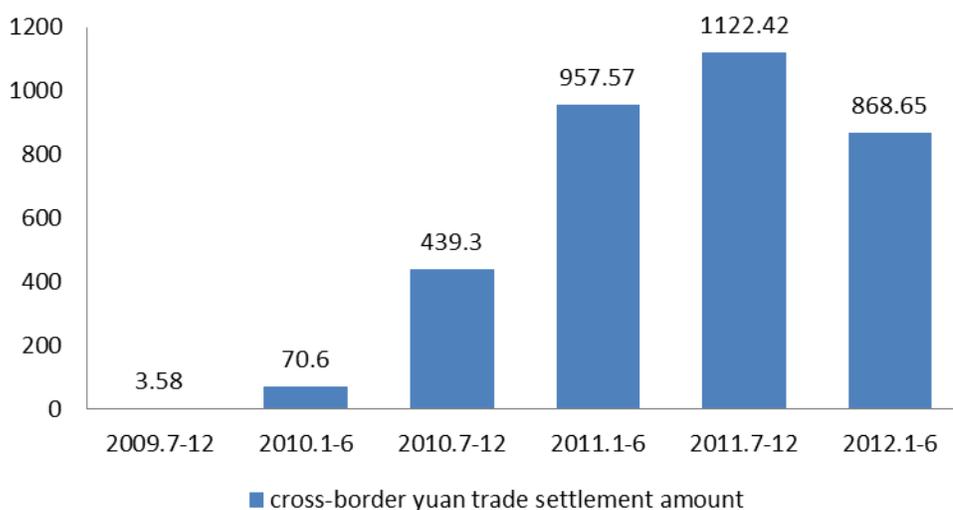
Employment. The rapid economic recovery had an positive impact on employment and the national income. Although China's official data maybe not precise, but the trend revealed in the data still was worth watching. In this case, the significant decline in the registered unemployment rate and rebound in deposable income could support our idea that employment and national income was improved by the growth-friendly monetary policy.

⑤ Significant progress of RMB internationalization

The international role of RMB was improved significantly by all the measures below.

First, cross-border yuan trade settlement experienced rapid development. The settlement amount was 3.58 billion yuan in 2009, 506.34 billion yuan in 2010, 2.08 trillion yuan in 2011 and 868.65 billion yuan in the first half of 2012.

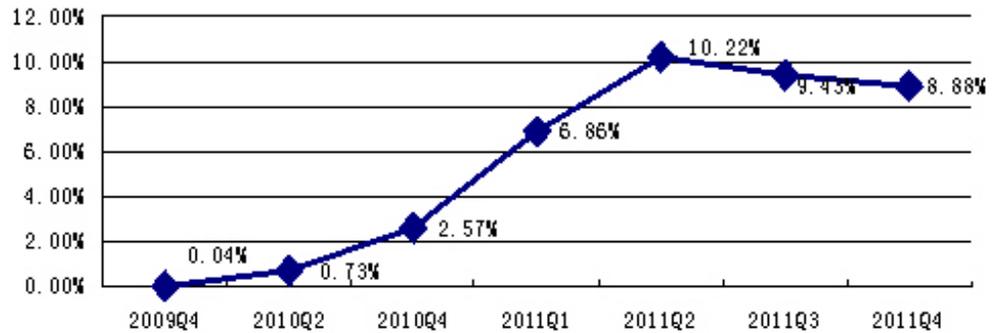
Figure 8 cross-border yuan trade settlement amount (billion)



Source: PBOC

Driven by the supportive policies and strong market demand, RMB had become one of the most important settlement currency in China's cross-border trade. The proportion of RMB settlement in international trade increased from 0.04% in 2009 to about 10% in 2011.

Figure 9 The Proportion of RMB Settlement in China's International Trade



Source: PBOC

Second, RMB was more widely used in the surrounding countries, especially the ones closely linked to China through bilateral trade.

Third, the exchange system between RMB and many kinds of foreign currency had been established. As of 2011, there were 9 kinds of foreign currency, including Us dollar, Euros, Yen, Hong Kong dollar, pounds and the other major currencies, that can directly exchange with RMB in China's currency market.

Fourth, some countries began to adopt RMB as a reserve currency. So far, South Korea, Malaysia, the Republic of Belarus, Thailand, Russia, Cambodia and the Philippines have announced RMB as a reserve currency. However, the RMB reserve remains very limited. For example, the proportion of RMB reserve in Thailand's central bank is only less than 1%.

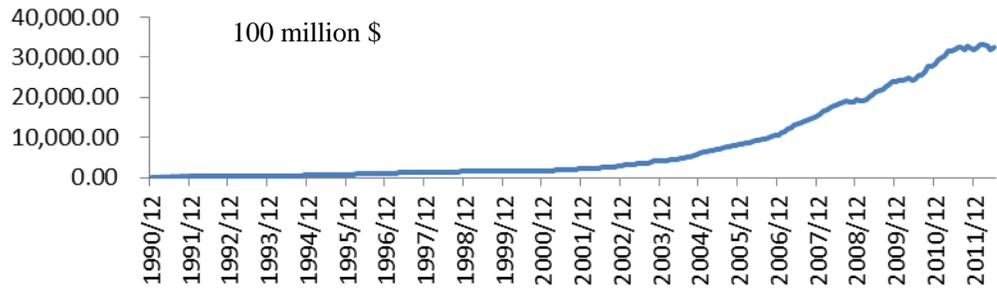
5. Challenges and Future Reform of China's Monetary Policy Regime

5.1 Excess accumulation of FX reserve and further reform of exchange rate system

China has started a rapid and continuous accumulation of foreign reserve since 2002. It is worth noting that China formally entered the WTO at Dec 11, 2001. It was not a coincidence. Just because of the entry of the WTO, China becomes the biggest winner of globalization by its unexpected growth of export industry. As a by-product, China owns the largest foreign reserve in the world. Besides WTO, monetary policy makes a contribution to the excess accumulation of foreign reserve. For one thing, China has not established a free-floating exchange rate system. Just like Japan and Korea in the stage of economic take-off, China encourages the export-oriented development by pegged exchange rate system. Although PBOC declared that managed floating system was adopted in 2005, it was clear that export industry and relative departments of China successfully blocked the

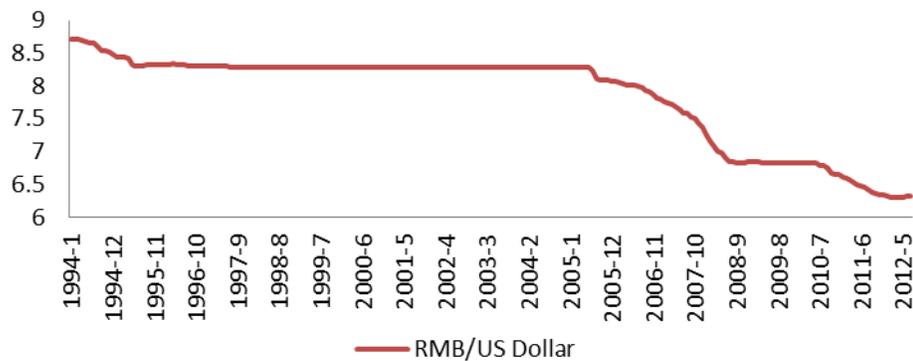
rapid appreciation of RMB, thereby foreign reserve continuing quick accumulation. For another, capital account control makes private sector and residuals in China cannot easily invest abroad, as a result, foreign reserve could be only accumulated in the PBOC.

Figure10 China's FX reserve



Source: Wind

Figure11 RMB exchange rate



Source: CEIC

From July 2007 when PBOC declared to launch a managed-floating system, to the end of 2011, the appreciation of RMB against US dollar amounted to 31.5%. Due to the appreciation of currency and falling of external demand, China's current account surplus quickly reduced from 10.1% in 2007 to 2.8% in 2011, which was already much lower than Germany and Russia (Table). As a result, the annualized growth of foreign reserve was only 3.7% in the first half of 2012, comparing that the annualized growth was 31.1% from 2001 to 2011.

Table2 Current account surplus to GDP ratio

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Germany	2.0%	1.9%	4.7%	5.1%	6.3%	7.5%	6.2%	6.0%	6.2%	5.7%
Russian Federation	8.4%	8.2%	10.1%	11.1%	9.6%	6.0%	6.2%	4.0%	4.8%	5.3%
China	2.4%	2.8%	3.6%	5.9%	8.6%	10.1%	9.1%	5.2%	5.1%	2.8%
Korea, Rep.	1.3%	2.4%	4.5%	2.2%	1.5%	2.1%	0.3%	3.9%	2.8%	2.4%
Japan	2.8%	3.2%	3.7%	3.6%	3.9%	4.9%	3.3%	2.9%	3.7%	2.0%
India	1.4%	1.4%	0.1%	-1.2%	-1.0%	-0.7%	-2.5%	-1.9%	-3.1%	
Brazil	-1.5%	0.8%	1.8%	1.6%	1.3%	0.1%	-1.7%	-1.5%	-2.2%	-2.1%

Source: World Bank.

Since the end of 2011, RMB represented a little depreciation trend against US dollar. From Dec 30, 2011, to Sep 14, 2012, RMB declined by 0.3% against US dollar. Three factors account for the RMB depreciation. First, euro crisis forced a large scale of deleveraging of western financial institutions. Second, the expectation of slowing down of China's economic growth became popular. Third, RMB has actually realized an obvious appreciation. Some economists even argue RMB is already overvalued. In other words, the unilateral appreciation of RMB has broken, which means the reform of China's exchange rate system has made significant progress.

However, the reform is far from total success. According to IMF's classification of exchange rate regimes, China now still adopts a crawling-like arrangement. Whatever RMB is undervalued or overvalued, China needs a more flexible exchange rate system. From the beginning, liberalization reform of exchange rate has been a sensitive problem for China because it affects many departments, including public and private sectors. So it is definite that PBOC will still be facing a big challenge in this area.

Since RMB ends the unilateral appreciation expectation, the necessity of PBOC's intervention to currency value also becomes doubtful. In fact, some economists believe that RMB now has a relatively firm basis to become a floating currency. During the last 7 years, PBOC pursued a gradual reform of exchange rate system and made considerable achievements. It is very likely that PBOC will continue its prudent and gradual style of reform. In April 2012, PBOC announced to widen the floating band of RMB's trading prices against the US dollar on the interbank spot foreign exchange market from 0.5 percent to 1 percent, which definitely enhanced the flexibility of RMB exchange rate in both directions. The next step of the reform is to further widen the floating band of RMB. It will be a relative long way for RMB to become a complete floating currency.

5.2 Open of capital account

In face of the macroeconomic policy trilemma in an open economy, China's government has maintained a combination of independent monetary policy, fixed exchange rate system (the "crawling peg" since 2005 was similar to fixed exchange rate) and controls on capital account, which strongly supported the rapid economic growth. However, the capital control has resulted in over-accumulation of official foreign reserves and to some extent, has impaired the independence of China's monetary policy. Moreover, in the context of RMB internationalization, the capital control also made RMB less attractive to foreign investors. In a word, it's imperative to step up opening capital account.

① Potential risk: significant but manageable.

No one can deny that the open of capital account would cause significant risk. However, given the special case in China, most of the potential risks can be manageable.

First, the risk of currency mismatches caused by capital account liberalization was relatively low. According to the statistics by PBOC, about 98% of the deposits and 95% of the loans in commercial banks are denominated in RMB.

Second, most of China's foreign exchange reserves assets are bonds, and the volatility of exchange rate wouldn't affect the repayment of principal and interest.

Third, as of 2011, China's foreign exchange reserves had reached a record high of 3.18 trillion dollar, which were enough to withstand the capital outflows after opening capital account. Furthermore, given China's economic fundamental and the prospects of growth that was much better than the other emerging market countries, it is in doubt whether a large scale of capital outflow would happen.

Fourth, the proportion of short-term external debt in China's debt was relatively low. As of 2011, the short-term external debt was 507.6 billion dollar, amounting to about 15.9% of the official foreign exchange reserves. China's government had plenty of money to handle the potential risk caused by short-term capital outflows.

Fifth, the risk in real estate market and capital market seemed to be manageable. In 2010, the foreign direct investment in real estate and business service were 24 and 7.1 billion dollars respectively, only 6.6% of the international payments surplus in that year. The foreign investment in capital market was much less. As of 2012, the quotas of 117 QFII and 17 RQFII were 22.24 billion dollar and 20 billion yuan.

For all these reasons, the opening of capital account doesn't have to be conditional on the liberalization of interest rate and exchange rate. In fact, one of the main purposes that PBOC dedicates itself to promoting RMB internationalization is to strengthen capital

account opening, which would also stimulate the liberalization of exchange rate and interest rate at the same time. It is a political wisdom which is called ‘reversed transmission mechanism’. In some sense, China’s entering WTO is a typical successful case of reversed transmission mechanism.

② Road map

In February 2012, the PBOC released a roadmap of opening capital account. Generally speaking, the principle is “inflow before outflow, long-term before short-term, agencies before individuals”.

A. Short-term strategy (1-3 years):

Loosen restrictions on the investment based on real deals and encourage the firms to go abroad.

The foreign direct investment is less vulnerable to the business cycle, so loosening restrictions on them is less risky. Given the excessive domestic investment and foreign exchange reserves, it’s imperative and valuable for China to increase investment abroad. Moreover, the appreciating RMB decreased the cost of investment and the financial crisis increased the demand for RMB investment.

B. Midterm strategy (3-5 years):

Loosen restrictions on the commercial loans based on real deals and promote RMB internationalization.

The commercial loans based on real deals were mostly related to current account. China’s export and import accounted for 10% of the global trade and China’s commercial loans accounted for more than 25% of the world’s commercial loans. Loosening restrictions on the commercial loans would be conducive to promote the growth of international trade and provide circumfluence channels for the RMB in Hong Kong offshore market. Furthermore, it’s also conducive to reinforce the competition of domestic banks.

C. Long-term strategy (5-10 years):

Strengthen financial market, first liberalize capital inflows then outflows and replace the quantitative limit with price management.

The transactions in real estate, stocks and bond market were link to both investment demand and speculative demand. It’s always difficult for us to distinguish the two kinds of demand. So given the potential risk, we should open the more developed markets first. Generally speaking, the principle is to open “primary market before secondary market” and “nonresidential domestic transaction before residential foreign transaction”, which could help lower the risk accompanied by the reform.

5.3 Liberalization of interest rate

① Potential challenges

China extended the floating range of lending and deposit rate and restarted to promote the liberalization of interest rate in June 2012, showing determination and confidence on the reform. However, there're quite a few challenges on the road to reform.

First, the reform may impair the stability of commercial banks. China's commercial banks used to rely on the spreads between deposit rate and lending rate, which accounted for 80% of the banks' profit. The intermediary business was a quite weak point. If the interest rate is completely liberalized, the deposit rate would rise and the spreads would be narrowed. For example, after the adjustment in June, the spreads has decreased, which decreased the profit of some banks. What's worse, the commercial banks lending a lot of money during 2008-2009 crisis and the nonperforming loans increased, which impaired their resilience to losses. All of these would make it more difficult to further liberalize the interest rate in the near future.

Second, the reform is not conducive to improve the market structure of the banking system, which may reinforce the monopoly of state-owned big banks. The small banks' profitability may be significantly impaired because they heavily rely on traditional business, which would shrink as the spread between deposit and lending rate narrows. The competition in the banking system would be more and more severe. In order to attract more depositor and borrowers, the banks have to cut the lending rate and raise the deposit rate, which would increase the cost and decrease the revenue. Comparing with the small banks, the state-owned banks have prominent advantages. They not only own more capital and resources, but also enjoy the guarantee by the state. Thus, many of the small banks may go bankruptcy and it would be more difficult for the small and tiny companies to finance.

② Policy priority

A. Improve the interest rate system and transmission mechanism.

The principle for the interest rate reform is to let the market determine the interest rates. China would step up building the transmission mechanism on the base of Shibor (Shanghai inter-bank offer rate). Then, the PBOC would use monetary policy tools to indirectly manage the market interest rates, which will affect the interest rate behavior of financial institutions. The firms and individuals will response to the rates through adjustment to consumption and investment. First, the government should link the price of the marketized products to Shibor. Specifically, short-term financial products and financial bonds come first, and then long-term financial products and corporate bonds follow. After

that, the deposit and lending rates should be linked to Shibor.

B. Promote the transition of commercial banks

With the interest rate liberalized, the commercial banks have to focus on the market orientation, which require the banks to reform the internal system of management and keep track of the customers' needs. It's also imperative for the banks to develop new profit model centered on intermediary business.

C. Supporting measures

The government should also attach much importance on supporting measures such as deposit insurance system, which is conducive to protect the depositors and prevent the potential financial risk.

To sum up, we have confidence on the liberalization of interest rate in China. Our financial institutions will become more competitive under the pressure, just like our people. There were similar concerns that the foreign firms would defeat ours when China entered WTO in 2001, however, China succeeded to overcome all the difficulties and became the "world factory" in the last ten years. What's more, China's firms learned a lot when buying foreign firms and we will continue to keep modest and learn more from other countries.

6. A Brief Conclusion

Some economists believe that China already loses its best opportunity of financial marketization reform and opening. In my view, it is hard to make such a judgement. Economic reform is not a theoretical calculation at all. It is almost impossible to find an optimal solution for a country's reform. We only need to find a satisfactory solution. As long as the Chinese central government and PBOC firmly pursue the financial reform and opening in the near future, China will build a well-performing monetary policy regime and accomplish its economic transformation, thereby becoming a powerful financial country in the world, just like it did in the manufacture industry in the past.

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