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Macro Adjustment & Control (MAC)

--- Aggregate Demand Management with China's Style (2000-2010)[1]

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Summary

As a transitional economy of huge size undergoing a rapid growth in a turbulent external and internal environment in the recent decade, China is inevitable to face various shocks and has to deal with challenge fluctuations with macro-economic performance. What policy tools have been more often used by the Chinese government in implementing macro-economic policies and managing the aggregate demand? What are the causing causes for the policy choices? How can we assess the characteristics of China's conduct of macro adjustment and control policies?

This paper aims to elaborate these issues through overview the evolution process of "macro adjustment and control policy", name reserved in China for conventional "macro-economic management policy" in China. The finding suggests that apart from monetary and fiscal instruments,

[1] An earlier version of this article was presented with the title "Economic Growth and Characteristics of Macro-economic Adjustment and Control (2000-2010)" in the 21st session of China Economic Observer held by China Macro-economic Research Center at National School of Development, Peking University on 25 April 2010. The paper was reported at ADB/CCER research project on China's economy on Feb. 24–25, 2011. Most of data and materials used in this study end by April 2010, but some are extended to the late 2010. I am grateful to the referee's comments and suggestion by ADB experts. Many thanks for Mr. Jiang Zhixiao who provides excellent research assistance in preparation of this paper.
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numerous quantitative controls, sectoral regulations are frequently employed with a view to controlling swings of macro-economic performance. Occasionally harsh and blunder administrative intervention measures are adopted in dealing with the changes related to aggregate demand if the situation is regarded special and requests urgent treatment.

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Macro Adjustment & Control (MAC)
--- Aggregate Demand Management with the Chinese Style (2000-2010)

Feng Lu

1. Introduction

The contemporary market economy emerged in the post Second World War era gradually took the shape in which the government plays an active role in managing aggregate demand so as to stabilizing the function of macro-economy. Various monetary and fiscal policy instruments that are frequently employed in discretionary manner for the counter-cyclical purpose are broadly defined macro-economic policy. The rationales underpinning the policy conduct of this kind are elaborated in the mainstream economic textbooks, so in a sense have become part of common knowledge of modern economics.

China started to reform the planning economic system from the late 1970s. Through the reform process has evolved with ups and downs and even setbacks, the Chinese finally accepted "the socialist market economy" as their envisaged future model of economic system in the mid 1990s. In line with the understanding that smooth function of modern market economy depends upon aggregate demand management by government, the role of macro-economic intervention has been emphasized both in theoretical reasoning and policy practices in the recent decade. To highlight "the Chinese characteristics", policy of this sort has been given a special name "Macro-economic Adjustment and Control (hongguan tiaokong)" in China, MAC for short thereafter.

Casual observation can notice that policy scope and tools choice for MAC in China go far beyond the conventional aggregate management policy regime prescribed in a standard textbook or observed in a more matured market economy. Apart from monetary and fiscal instruments, numerous quantitative controls, sectoral regulations are frequently employed with a view to controlling swings of macro-economic performance. Occasionally harsh and blunder administrative intervention measures are adopted in dealing with the changes related to aggregate demand if the situation is regarded special and requests urgent treatment.

More specifically, China's MAC measures observed over the recent decade can be divided into three categories. The first category is aggregate and parameter type tools, which includes ordinary monetary policies such as open market operations (OMOs) by People's Bank of China (PBoC), the adjustment of interest rate and RRR, fiscal policies such as adjusting government expenditure and deficits through issuing treasury bonds, exchange rate policies, and some other tools including policies concerning capital ratio of banks. The second category is sectoral and quantitative tools, such as credit control, quantitative regulations on land supply, tightening up of regulation with regard to environment protection, subsidy for production of certain agricultural products, and direct controlling demand for housing through various ad hoc measures. The third category is administrative intervention type tools such as temporary suspension of land supply for urban investment and construction projects, temporary price regulation on numerous daily commodities when inflation pressure is high, and dealing with legal cases signaling the strengthening of MAC implementation etc.

The rooting causes of this observed phenomenon are mainly two-folds. The first cause is historical in nature. China's economy is inherited from the planning system in which the government direct controlled every aspects of the whole economy. The imperative urge to exercise controlling power by the government prevails in addressing any undesirable movements with regard to function of macro-economy. The controlling mentality is not only influential among government officials, but also powerful in academic circles and the general public opinions. This tradition and mentality usually appeal to direct control rather than indirect adjustment mechanism in dealing with effects of various macro-economic shocks.

The second cause relates to the more recent open macro-economic environment in which passive and dynamic undervaluation of RMB imposes crucial constrains on flexible adjustment of monetary policy. As China has been undergoing the process of rapid economic catch-up underpinned by fast relative growth of productivity in tradable sector, the pegged or heavily regulated exchange regime adopted in the recent decade introduced imbalance of RMB exchange rate and passive undervaluation of domestic currency. Currency undervaluation coupled with other factors caused excessive growth of aggregate demand and periodic inflation pressures. When monetary policy is largely constrained, various alternative policy instruments have to be adopted.

Diversified policy tools are useful in handling the consequences of various shocks faced by the Chinese macro-economic performance in a swift and effective manner given that the more market oriented adjustment instruments are constrained by the existing policy regime. On the other hand, too much discretionary conduct of MAC, excessive use of ad hoc intervention in the name of MAC inevitably blur the boundary of market function and government with negative implications for nurturing long-term expectation by market agents and improving market environment .

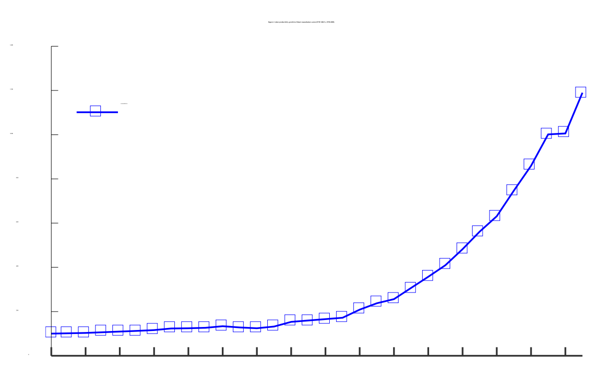
China therefore faces a dilemma. She needs more discretionary policy instruments addressing various unexpected shocks and uncertainties inherent from the imperfect market system in the institutional transitional period so as to assuring at least a reasonable degree of macro-economic stability. But on the other hand relying upon ad hoc intervention too much introduces shocks and uncertainties of drastic policy shifts that is inconsistent with the goal to improve and nurture the market system. While diversified MAC solved some problems and proved partial effectiveness, they also caused new problems and incurred efficiency loses. In acknowledging this difficulty, the Chinese government official documents repeatedly emphasize "strengthening and improving MAC" as policy objective.

Diversified policy tools and the contradictory effects of MAC can be observed in the second half of the 1990s soon after China officially adopted "the model of socialist market economy with the Chinese characteristics". The pattern did not fade away as time goes by. The first decade of the new century witnesses a remarkable strong boom of economic growth in China. Aggregate demand faces more shocks and difficulties such as persistent inflation pressure including excessive asset price volatility, external imbalance of rapidly growing surplus etc. In order to maintain macro-economic stability, MAC has been conducted through utilizing even more diversified policy tools with controversial effects.

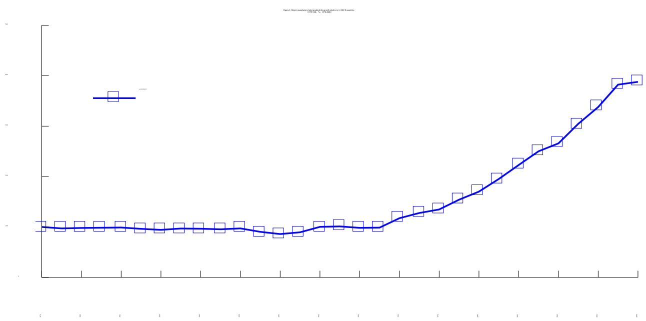
As the first step of a systematic study on the conduct of China's macro-economic policy during the last decade, this paper aims to present stylized facts about diversified tools of MAC through an overview of policy practice of MAC in the period. On the basis of the observation, the pros and cons of the special policy pattern will be discussed and future policy reform direction will be briefly commented. Following this introduction, section 2 gives an overview of China's macro-economic performance in the recent decade, sections 3-6 reviews conduct of MAC through four stages of observation, section 7 summarizes and comments on special feature of diversified policy tools of MAC in China.

2. China's Strong Macro-economic Performance in the New Period

Entering the new century, especially since 2003, China's economic growth has presented some stylized facts. Firstly, China's labor productivity has been rapidly catching up. One outstanding performance of economic catch-up in globalized economy is the rapid growth of labor productivity in tradable sector. Figure1 and Figure 2 present some data of China's growth and make a contrast between China and OECD countries in productivity of tradable sectors represented by manufacturing industry. As shown in Fig. 1, China's manufacture productivity has increased 5.9 folds with its index jumping from 172 to1190 during 1995 and 2009, while productivity in OECD nations has tripled.



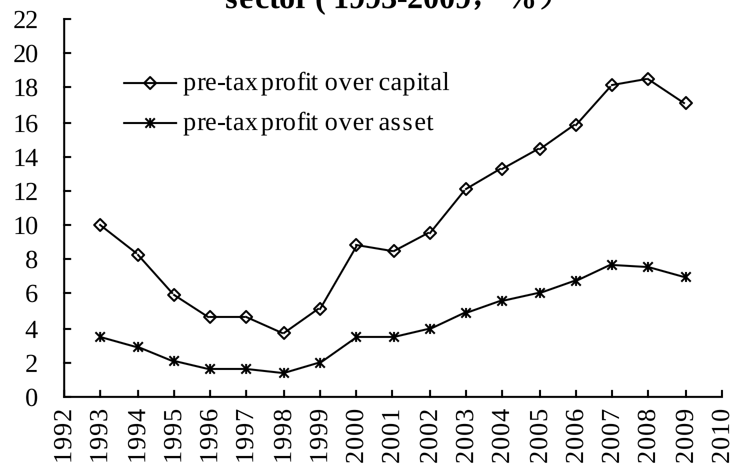
Sources: Data for the period 1978-2005 are from Lu and Liu (2007), figures for the recent years are calculated using data of "China Statistical Yearbook" in recent years.



Sources: Data for the period 1978-2005 are from Lu and Liu (2007), figures for the recent years are calculated using data from “China Statistical Yearbook” and OECD data set in recent years.

Secondly, China’s capital return has growing strongly in the recent decade. The ever-growing return rate on industrial capital since the turn of the century has supported investment and the increase of domestic demand. Lu et al (2007) measured nine indexes of capital return in China, believing that China’s capital return has caught up with Japan and is gaining on the US. Data in Figure 3 suggest that the profitability before income tax on equity has risen from 5.1% to 17%-18% for the “above-scale industrial enterprises”[3] during recent years.

Figure 3. China's profitability in industrial sector (1993-2009， %）



Sources: Data for the period 1978-2006 are from Lu et al. (2007) and figures for other years are calculated using data of “China Statistical Yearbook” in recent years.

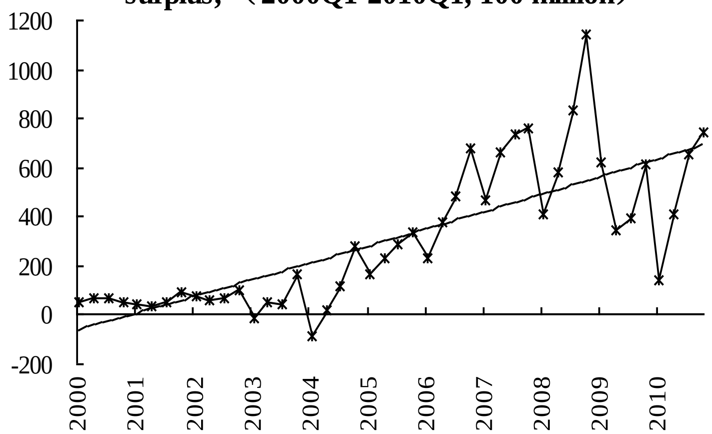
Thirdly, China has become by far the largest country in terms of incremental

[3] “Above-scale industry enterprises” include all the state-owned enterprises (SOE) and those non-state-owned enterprises with annual sales above 5 million yuan.

contribution to global commodity market. China's increment in demand for the four main commodities (copper, aluminum, iron ore, and oil) took up 30%-40% of global increment in middle 1990s. This proportion decreased significantly around the turn of the century but then increased continuously to a high level of 60-70% in recent years. China has recently become the largest incremental contributor in the scale of investment measured by US dollar, and the largest contributor in aggregate demand for the first time during the financial crisis last year (Lu, 2008a; Lu and Li, 2009). The recent data indicates that China is becoming the largest country in terms of incremental contribution to global investment and aggregate demand.

Fourthly, the lag in the reform of exchange rate regime is accompanied by external imbalance with a large scale of trade surplus. In the context of productivity catch-up and inflexible exchange rate regime, China is faced with disequilibrium in her balance of payments. Data in Figure 4 illustrate that China's quarterly trade surplus began to grow strongly from 2003-2004, reaching 124 billion dollars in the fourth quarter of 2008. The surplus has fallen drastically during 2009 and the first quarter of 2010, but it bounced back in recent quarters. China has become the largest surplus country with US in recent years. The deficit of 256.7 billion dollars with China took up about 30% of the total US trade deficit in 2007. It is widely believed that there exists some kind of "mirror image relationship" between the increase of China's surplus and the increase of US deficit (Lu, 2008b).

Figure 4. China's quarterly goods trade surplus, （2000Q1-2010Q1, 100 million）

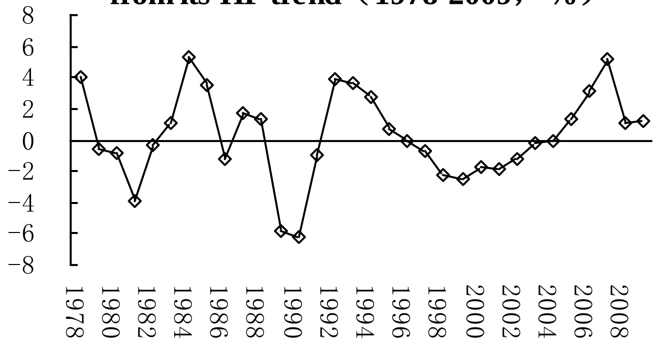


Sources: China Statistical Bureau. The figure for the 4th quarter 2010 is estimated on the basis of the estimated import and export growth rates for the quarter by "Lang-Run Forecast on China's Macroeconomic Indicators" announced by CMRC in 23, October 2010.

Fifth, using the HP trend as a simple measurement of the potential aggregate supply growth path for China's economic growth over the last 3 decades or so, we may interpret the deviation of the actual growth trajectory from the trend as measurements on the excessive or relatively weak performance of growth of aggregate demand. As reflected in Figure 5, in the post-reform era, there are three periods in which aggregate demand has been growing excessively in three or more consecutive years. The first is the period of

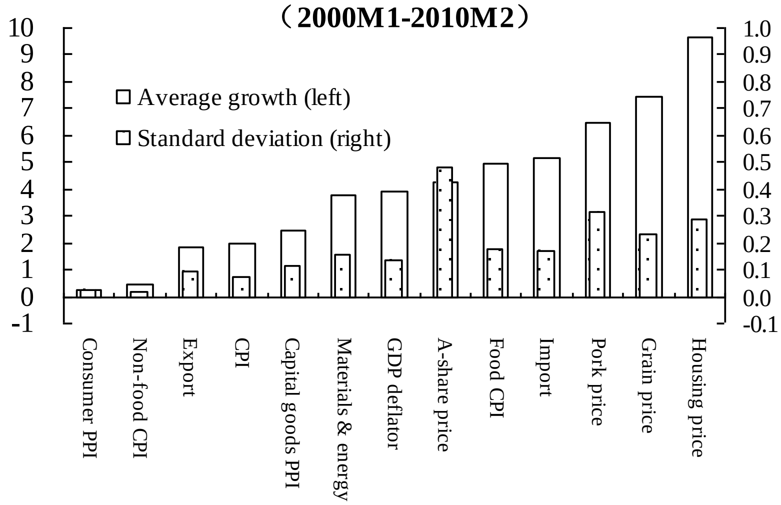
1983-1985 over which, aggregated demand grew above the trend for 3 years consecutively with 8.52 percentage points of accumulative excessive growth. The second period was 1992-1995 with 11.3 percentage points of accumulative excessive growth. The most recent period was 2005-2009 with 12.1 percentage points of accumulative excessive growth.

Figure 5、 Deviation of China's growth from its HP trend（1978-2009， %）



Sixth, the various general price indexes and crucial commodity prices that assume important role in measuring inflation pressure present distinct pattern in which changes in different indexes vary greatly. As indicated in Figure 6, the pattern may be summarized in “four fast and four slow”, i.e., the asset prices, raw materials prices, prices of imported goods and agricultural products have on average increased relatively quickly, while those of exported prices, manufacture products especially for personal consumption, and general commodity prices rise slowly.

Figure 6. Average growth rate and standard deviation of various price indexes in China （2000M1-2010M2）



Sources: Author calculation using various sources.

3. Pro-active MAC Policies at Beginning of the Decade (2000- the

first half 2003)

China's macro-economic performance in the first decade of 21st century can be divided into several phases: "Going out of deflation", "Dealing with inflation", and "the great V-shape fluctuation". MAC policies are adjusted accordingly.

At the beginning of the decade, the crucial challenge faced by China's macro-economy was deficiency of aggregate demand, so the primary objective of MAC this period was dealing with deflation using expansive fiscal and monetary policies tools. China entered into a new boom period from 2003. Albeit with fluctuations, the strong growth with persistent pressures of overheating and inflation continued right through the early 2008. The MAC policy was pre-occupied by the assignment to cool down the excessive growth and preventing inflation from going out of hand. Facing external shock of global financial crisis and fast slow-down of domestic economic growth, China adopted large scale of stimulus package named "4 trillion yuan program" in the late 2008. In part boosted by the excessive credit and monetary expansion and implementation of fiscal expansion programs, the Chinese aggregate demand took a drastic U-turn and experienced a V-shape recovery coupled with inflation pressure looming ahead. China's MAC policy stance was partially adjusted towards tightening up from the summer 2009 until the late 2010 when this paper is drafted.

The following sections review the evolution of China's MAC policies in each stage over the period. We begin by looking back the expansive macro-policy dealing with the deflation pressure at the beginning of the decade. China's economy had maintained a growth rate of nearly 8% during 2000-2002 with CPI close to zero. Though growth rate of 7-8 percentage points sounds good in the context of international comparison, it is widely believed that China faced the problem of deficient aggregate demand since many economists assume that the Chinese potential growth rate then was around 10%. Worsening situation with regard to unemployment resulting from large scale of SOE reform was interpreted as evidence that China's macro-economy was underperformed. Zero and negative CPI suggest that China's economy was troubled by deflation[4]. Given the circumstances, China's MAC policy in this period was mainly driven by objective to expand aggregate demand and fighting against deflation.

3-1. Fiscal Policy

China continued to carry out pro-active fiscal policies facilitated by growing fiscal deficits and issuing Treasury bonds[5]. In view of excessive decline of economic growth rate and deflation occurred in the first half of 1998, the Chinese policymakers decided to use fiscal policies more often so as to promote investment and boost domestic demand. In August 1998, the Standing Committee of the National People's Congress approved a bill on budget amendment, issued additional 100 billion yuan of long-term Treasury bond that will be used as a special fund to finance infrastructural investment. Correspondingly, the 18 billion yuan originally aimed at infrastructure investment was transferred to "current

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[4] Even though there was deflation reflected by zero and negative consume price index, price increase for energy, power, transportation, agricultural products and housing. This was been named by some observers as the so called structural inflation (Liu and Cai, 2005).

[5] As discussed in Xu (2003), the saving rate of Chinese residents was high during that time after successive reductions of interest, so a good way to stimulate domestic demand was to issue more treasury bills, borrowing money from Chinese people to finance public investment projects.

account"[6] to increase expenditure for science and education, the basic living allowance for the laid-off employees of state owned enterprises (SOEs) and the basic pensions for retirees on time and in full[7]. In 1999, 50 billion yuan and 60 billion yuan long-term treasury bonds were issued, and the money raised was divided evenly between central and local governments to finance investment on infrastructure.

The income distribution policies were adjusted. New policies were introduced to help growth of income for medium-and-low income residents. The government raised the level of "three guarantees" in social security system[8], i.e., the basic living allowance of the laid-off employees of state owned enterprises, the unemployment insurance, the minimum living allowance standard for the urban and township poorest residents. To address the problem of sluggish and weak investment, the Chinese government cut "fixed assets investment orientation regulatory tax" by half in the second half 1999, and granted reduction or exemption on business tax, contract tax, and land value-added tax. Part of pro-investment policy adjustments aims at stimulating real estate industry (Ministry of Finance, State Administration of Taxation, 1999a, 1999b, 1999c).

In 2000, China intensified the efforts of proactive fiscal policies. 100 billion yuan of long-term treasury bonds were issued at the beginning of the year and another 50 billion were issued to speed up the construction of projects financed by treasury bonds (Standing Committee of the National People's Congress, 2000). In 2001, proactive fiscal policies were retained. The total amount of long-term treasury bonds was 150 billion yuan, 100 billion of which was mainly used to make up the shortage of follow-up funds for construction projects kicked off earlier. The rest 50 billion was used to support the key projects such as the Qinghai-Tibet Railway[9]. The 2002 policies assumed similar pattern in 2001 policies but managed to arrange the fund through issuing new treasury bonds even sooner[10].

3-2. Monetary Policy

China's monetary policy was officially expressed as "a prudent monetary policy" at that time, but the actual policy stance was pro-active aiming to promote the aggregate demand. For instance, the 1-year deposit and loan policy interest rates were reduced to from 7.47% and 10.08% respectively in Jul. 2007 to 2.25% and 5.85% in June 1999 through five times of adjustment, and were further lowered to 1.98% and 5.31% in February 2002. They were not raised back to 2.25% and 5.58% until October 2004. The rate of the required reserve ratio (RRR) was reduced from 13% in Mar. 1998 to 6% in January 2000. Besides, PBoC, the Chinese Central Bank announced to lift quantitative restriction on the loan ceilings imposed on commercial banks in early 1998. The focus of bank regulation will be shifted to monitoring and supervision of risk and balance sheet

6 The Chinese central government budget was composed of "current account" concerning non-capital budget and "construction account" for investment that would affect production capacity in future period. It was very unusual to have deficit in "current account" or excessive deficit in "construction account" those years. So issuing additional treasury bonds was a special measure to expand domestic demand (Liu, 2003).

7 The State Council (1998a), Standing Committee of the National People's Congress (1998).

8 As Jia (2002) commented that it was quite unusual to make such a big adjustment about fiscal policies in the mid-year in PRC's history, which was a symbol of improving MAC. See Ministry of Finance (1999a, 1999b), and Ministry of Land and Resources, State Planning Commission (1999).

9 Chinaccmcom (2001) "The Ministry of Finance will issue 100 billion yuan of treasury bonds to finance development of the west", http://www.chinaccm.com/06/0610/061001/news/20010319/095822.asp .

10 See Jia (2002).

managements.

3-3. Industrial Policy

Though there is dichotomy between macro-economic policy and industrial policy in a standard textbook of economics, the dividing line was blurred or even largely absent in China. A striking characteristic of China's economic policy conduct was that various sectoral and quantitative oriented policies were adopted as policy instruments for purpose of macro-economic management. Many intervention measures of industrial policy type were implemented as part of MAC program. This is widespread observed facts as well as demonstrated in standard official documents. Measures dealing with excess capacity are good examples in this context.

Excess capacity refers to a situation in which the production utilization ratio in a given sector, or the average ratio for various sectors fall below some desirable level. It usually goes together with persistent price fall and the profitability deterioration. The concept is not conventionally used in macro-economic analysis since the macro-disequilibrium is mainly defined in aggregate terms. Ever since late 1990s, the concept of overcapacity has played a prominent role in China's MAC. In 1999, policies dealing with overcapacity began to be applied with great intensity, including restriction on the output of sectors with excessive inventory investment, close-down of backward production facilities in some sectors, and restriction of new investment in some sectors with a view to preventing occurrence of excessive construction and worsening situation with regard to overcapacity. As indicated by MAC practice in the subsequent periods that will be observed later in this paper, periodic campaign against overcapacity has become an integral part of MAC in the recent decade.

There were various policies restricting investment in overcapacity sectors. As an important policy measure, some sectors were picked up as those troubled with "repeated construction" by the relevant government ministry. New investment and construction on these sectors were restricted and heavily regulated. As announced in 2009, sectors falling into this category covers iron and steel, non-ferrous metals, coal, gold, petrochemical, chemical, pharmaceutical, building materials, electronics, machinery, electrical, light industry, textile, tobacco, shipbuilding, tourism, and commerce. About 200 projects were closed down in this round of campaign against repeated construction and over-capacity. As the most severe measures, new projects were banned for 3 years in sectors such as thermal power, copper smelting, electrolytic copper, copper-aluminum machining, and magnesium smelting (State Economic and Trade Commission, 1998).

The industrial policies of this sort did play a positive role in addressing pollution and emission, encouraging firms to upgrade their technology, promoting the reform of SOEs. However, the strict restriction on investment had their apparent side-effects in a macro-economic environment underpinned by problem of inadequate aggregate demand and deflation. The Chinese policy designers probably realized subsequently the apparent contradiction between the macro-economic environment with deflation pressure and industrial policy imposing extra restriction on investment for the sack of preventing over-capacity. Ironically, as discussed in the subsequent sections, intervention measures of investment control on selected sectors on behalf of dealing with over-capacity became a major policy instrument of MAC in fighting against pressures of macro-economic overheating and inflation in many years to come.

3-4. Exchange Rate policy and Other Policies

Reform on exchange rate regime for RMB, the Chinese currency, has been an integral part of China's "reform and opening up" process from the early 1980s. As a result of difficult but persistent reform efforts, China adopted "unified, managed and floating exchange rate regime" in a comprehensive and bold reform strive in 1994. RMB witnessed a significant appreciation in the subsequent 3 years after the 1994 reform.

The Chinese government started to peg RMB to US dollar as part of policy response to the Asian financial crisis in 1998. This policy produced positive results beyond economic benefits, but it also make the deflationary situation even worse through contracting effects on China's exports during the aftermath of crisis as a result of pegged RMB exchange rate with currencies of major Asian economies that devalued versus US dollar. Constrained by pegged exchange rate, China tried to stimulate export using fiscal policies, especially the policy of value added tax rebates. The tax rebate rates for some selective exported goods were raised twice in early 1999 and on July 1st 1999, making the average rebating rate above 15%[11].

Other reform policies were of important macro-economic implications. For example, China started to introduce major bank reform from 1998. As a part of the reform program, four assets management companies were established to spin off bad loans accumulated in balance sheets of major state-owned commercial banks. Other measures were adopted in the same time to reform corporate governance for commercial banks. The policy measures were useful in relaxing constrains faced by banks in providing loans to firms because banks lack of capital.

4. Tightening Policies in the First Phase of Boom (the Second Half 2003- the First Half 2005)

Even though China's economic performance was troubled by SARS epidemics, the growth rate of GDP increased to 10.6% in 2003. Specially, the growth rate of the last quarter in 2003 was 11%, which was the highest since 1996. At the end of 2003, CPI and PPI both increased to 3%, a critical parameter in assessing the macro-economic situation taken by mainstream economists in China. Through a debate from 2003, a consensus gradually emerged in late 2003 and early 2004 that China's macro-economy had moved out of deflation and began to face risks of overheating and inflation from second half of 2003.

In the following five years or so, China's economic growth witnessed a distinct pattern and entered a new phase with several striking feature. Albeit with significant ups and downs, China's macro-economy performed quietly strongly. The risk of macro-imbalance was primarily from the side of excessive growth and overheating with the lingering inflation pressure and periodic asset price hikes in capital and real estate markets. Most importantly and never occurred before, China encountered unexpected striking external imbalance underpinned by rapid growth of trade surplus and foreign exchange reserve.

With this unusual macro-economic mix of "excessive aggregate demand growth plus external surplus imbalance, the Chinese government made tremendous efforts to deal

[11] See Ministry of Finance, State Administration of Taxation (1999b, 1999c).

with the situation. Aiming at maintaining reasonably rapid economic growth and controlling problems of overheating and inflation, extensive policy measures were implemented to address various aspects of the macro-economic dis-equilibrium. The characteristics of MAC were fully revealed and demonstrated through observing macro-economic policy practice in this special period.

The heavy handed conduct of MAC did dragged down the macro-economic growth temporarily in 2004, but the economy quickly return to the fast growing trajectory with the structural problems even more intensified. We look at the MAC practice through two stages. This section observes policy measures in the first phase during from the second half 2003 to the second half 2005, while the following section examines the second phase from the second half 2005 to the early 2008.

4-1. Monetary Policy

Starting from April 22nd 2003, People's Bank of China (PBoC) took several measures including issuing central-bank bills, raising RRR, and expanding the floating area of loan interest rate by commercial banks so as to adjusting the expansionary monetary policies. In this year PBoC held three "window guidance" sessions to urge financial institutions cautious about against credit and liquidity risks. In June 2003, PBoC distributed the No. 121 Document aiming at cooling the overheated real estate market through raising the rate of the legal deposit reserves in commercial banks. (People's Bank of China, 2003). It was reported that in an internal meeting on July 28th, 2003, the governor of PBoC provided early warning of inflation for the first time. But there was a debate about the short term risk of inflation in the Chinese economy in the academic circles and media discussion. PBoC's early measures triggered noticeable controversies.

The overheating trend of China's macro-economy became apparent in the late 2003 and the early 2004. PBoC continued in adopting various measures to adjust and reverse the previously implemented expansionary monetary measures. More and more central-bank bills were issued in order to neutralize the monetary shocks from the ever growing scale of foreign exchange reserve resulting from "dual-surplus of current and capital accounts". Outstanding central bank bills reached at 1.1 trillion yuan in late 2004. RRR increased from 6% before Sep. 2003 to 7.5% in April 2004. But the adjustment of policy interest rate lagged behind. In fighting against deflation, the policy deposit and loan rates were reduced to 2.25% and 5.85% respectively in June 1999, and further downward adjusted to 1.98% and 5.31% in February 2002. They were not raised back to 2.25% and 5.58% until October 2004. And the next hike of the rates had to be waited until August 2006.

4-2. Fiscal Policy

The official expression of fiscal policy maintained the statement of "proactive fiscal policy" in 2003 and 2004, the actual conduct of fiscal policy were nevertheless modified. Dosage and degree of stimulus fiscal measure slowly and gradually reduced. The official fiscal policy stance did not formally turn into neutral and prudent until 2005.

The Government Work Report made in March 2003 (Zhu Rongji, 2003) stated that "we should adhere to the policy of expanding domestic demand, continue to implement proactive fiscal policy and prudent monetary policy, and ensure a double-pull effect of both consumption demand and investment demand on economic growth." The 2004 Report (Wen Jiabao, 2004) announced that "to do better job in MAC, we shall maintain continuity and stability of MAC policies, and adjust the focus and intensity of policies at the proper time and to an appropriate degree. At proper time means to seize the opportunity, to recognize the whole through observation of the part, and to take preventive measures to guard against possible trouble. To an appropriate degree means that MAC policies should be conducted with proper intensity, not to pull up the brake suddenly, and not to impose uniformity on the implementation of policies. We should adhere to the policy of expanding domestic demand, and continue to implement the proactive fiscal policy and prudent monetary policy." In the same year, the report from head of the State Development and Reform Commission (Ma,2004) also emphasized that "we should keep continuity and stability of MAC policies, stick to the policy of expanding domestic demand, and continue to implement the proactive fiscal policy and prudent monetary policy." The report put forward nine tasks and goals, including the investment areas financed by 100 million yuan of treasury bonds.

As the economy recovered and grew strong, the intensity of proactive fiscal policies was reduced. For instance, the ratio of deficit in central budget as a proportion of GDP decreased from 2.6% in 2002 to 2.0% in 2003 and 1.6% in 2005; the ratio of treasury bonds as a proportion of GDP decreased from 4.9% in 2002 to 4.6% in 2003 and further to 3.8% in 2005.

The debate on whether to withdraw expansionary fiscal policy started from the mid-2004. On May 27th 2004, the then finance ministry suggested that China's fiscal policy stance should be adjusted from being proactive to neutral (Gao, 2004). Late in July, the Ministry of Finance held an informal meeting to solicit opinions from economists who generally believed that it was imperative to shift the fiscal police stance to neutral in view of the fact that the economy had entered a new round of strong expansion. In early August of 2004, the Ministry of Finance held another meeting at which the participating experts and scholars agreed that fiscal policies should be adjusted according to the economic situation. In late November 2004, the same Ministry held an international conference to ask for opinions of experts from the World Bank, IMF, ADB and selected international financial institutions. The experts also generally agreed on formal adjustment of fiscal policy stance. In December 2004, the Central Economic Work Conference of CCP decided to adopt a prudent fiscal policy. On March 5th 2005, the Government Work Report (Wen Jiabao, 2005) announced that a prudent fiscal policy would be followed in 2005. The episode highlights a fact that it usually takes a rather lengthy period for the fiscal policy stance being shifted from being pro-active to neutral or tightening up. In contrast, it usually took a relatively short period for the fiscal policy turn into proactive should changing macro-economic situation indicated its necessity.

4-3. Exchange Rate Policy

From 1995 to 2005, China's labor productivity had increased 3.4 folds in manufacture sector, and 80% in service industries. Given manufacture as a representative of tradable sectors and service industries as a representative of non-tradable sectors, China's relative productivity in tradable sectors had increased 2.4 folds. During this period, China's relative productivity in tradable sectors had increased 65.5% vs. US and 92.8% vs. 13 OECD countries. (LU Feng, 2006). Under this condition, RMB needs to be appreciated in real terms. But actually, both nominal and real exchange rate of RMB maintained at a low level even China had recovered from the Asian financial crisis.

Although there had been debates about the reform of RMB-exchange-rate policies, China maintained her dollar-peg policy stance until July 21st, 2005. Given the nominal exchange rate pegged to dollar, RMB depreciated in weighted average and real terms during 2002-2004, due to the change of other currencies' value and the differences in inflation at home and abroad. From early 2002 to late 2004, the nominal effective exchange rate indices of RMB (NEER) fell from 134 to 115, and the real effective exchange rate indices of RMB (REER) decreased from 158 to 128.

4-4. Industrial Policy

Macroeconomic disequilibrium in China is usually associated with intensified bottleneck sectors and rapid growth of investment in specific sectors. The disequilibrium occurred in this way quite often triggers intervention measures from government ministries. Controlling and restricting investment in targeted sectors using sectoral regulation and industrial policies figured prominently in measures adopted in dealing with the problems. As an important component of MAC in the period, these industrial policies were often conducted on behalf of preventing from occurrence of overcapacity in future.

In late 2003 and early 2004, reports of pressure on tight supplies of coal, electricity, and petroleum could be heard without end. More than 20 provinces and cities experienced electricity blackouts. The opinion of policymakers was that the main cause of the economic overheating was that a few sectors such as steel, cement, and electrolytic aluminum were growing too fast. As a result the government introduced a series of policies to control investment in these areas. In late 2003, the government agencies promulgated documents with tough control on investment in these sectors. China Banking Regulatory Commission (CBRC) strengthened its supervision on credit, land administrative department tightened land supply, and environmental protection bureaus intensified their efforts, all worked towards tightening up of investment in the targeted sectors. NDRC played a key role in constraining investment in these sectors through the process of strict examination and approval process. In February 2004, the State Council called relevant departments and local governments for a video and telephone conference and requested to strengthen their regulation on overheated investment in these sectors. In this conference, the state council specifically mentioned that the control of credit and the examination and approval of land use should play crucial role in achieving the objective of MAC in the context[12].

In 2004, a regulation document entitled "The Catalogue for Restraining Low-level and Repeated Construction in Certain Sectors" was issued by the government. The sectors classed as "industries which should be restrained" were those with seriously excess capacity, with backward technology which could be substituted by advanced and mature technology, and those with adverse effects on resource conservation and environmental protection etc. Investment supervision departments of governments at all levels were required to stop approval of projects in these sectors. Proposed projects and projects under construction in the sectors were required to stop or suspend for being "checked up and consolidated" (National Development and Reform Commission, People's Bank of China, China Banking Regulatory Commission, 2004).

4-5. Credit and Financial Policy

China Banking Regulatory Commission (CBRC) was founded in 2003, aimed at

[12] See www.huaxia.com, http://www.huaxia.com/sw/cjzx/jjdt/00173561.html.

“protecting the benefit of general depositors and consumers by prudential and effective supervision, increasing market confidence by prudential and effective supervision, increasing the public’s understanding of modern finance by dissemination of information and education, and fighting against financial crimes”[13]. Article I in “General Provisions” of “Banking Supervision Law” states that the function of CBRC is “to strengthen the supervision and management of the banking industry, standardize regulation, prevent and dispel banking risk, protect depositors and other lawful rights and interests of customers and promote the healthy development of banking industry” (Standing Committee of the National People's Congress, 2003). Shortly after the formation of CBRC, new round of MAC policy launched to deal with the macro-economic imbalance in direction of overheating and inflation. CBRC played an active role in MAC policy practice.

The main methods adopted by CBRC in participating the tightening-up MAC policies included strict requirements imposed on capital adequacy ratio for banks, strengthening supervision on non-performing liabilities (NPLs), and intensified supervision on credit and finance in specific sectors according to the industrial policy discussed above. For instance, in April 2004, CBRC introduced seven MAC measures, including urging commercial banks to strictly implement the requirement of capital adequacy and full provision for possible loan loss, requiring commercial banks to strengthen their risk management, paying attention to credit concentration risks and related transactions, calling for coordination between credit policy and industrial policy so as to promote the assets restructuring, etc. CBRC required its local dispatched offices to strengthen their supervision, and urged banking financial institutions to faithfully implement all the macroeconomic and industrial policies (National Development and Reform Commission, People’s Bank of China, China Banking Regulatory Commission, 2004).

CRBC required all commercial banks to prohibit new loans to projects of low-level repeated construction or inconsistent with industrial policies or the required market access conditions. Loans are not allowed for those projects which were not examined and approved by established procedures by relative government ministries. Incurred credit and issued loans were required to be rectified in an appropriate and steady way. Overheated sectors such as steel, electrolytic aluminum, cement, real estate and automobile were required to be regulated more closely. Loans for projects of communal facilities and infrastructure such as coal, electrical power, petroleum, transportation, and water-supply would were been given special preferential treatments. CBRC required banks to strictly keep a prudent loan reserve regime, raise their capital ratios, strengthen their supervision on each deal of loan at any time, and directly monitor major clients and institutions.

On June 3rd 2004, CBRC held a national television and telephone conference so as to implementing the national MAC policies. In this conference, CBRC required relevant units to seriously study and thoroughly understand the MAC policies, firmly implement MAC policies without hesitation. The conference stressed the need to focus on the following tasks. The first was to closely monitor and analyze the developments and changes of macro-economy and financial situation. The second was to supervise the adequacy of loan provision and to assure replenishment of capital. The third one was to

[13] “Purpose of Work for CBRC”, http://www.cbrc.gov.cn/chinese/info/yjhjj/.

continue to strengthen risk preventing and window guidance, deal with various risks such as the loan concentration risks, credit risks from real estate companies and automobile companies, keeping a good balance between short-term and long-term loan, and credit risks from low liquidation of fixed assets investment projects, etc.[14]

4-6. Land Policy

In order to understand why land policy can be used frequently in China's macro-economic management, we need some basic background information about China's unique land system. The China's special land regime treats the land rights in rural and urban areas differently. By law, the collective rural organizations ultimately own the rural land but they have to lease out the land to household farmers in long-term contract extended for several decades. Farmers may choose anyway to use and dispose the rights of land as long as the land still used for the purpose of agricultural protection. In the urban areas, all the land is owned by the state that may transfer the user rights to individual market agencies through various channels including market auctions.

The unique nature of this strange system can be easily understood if you ask a question: how can a piece of rural land be made available for urban construction? The answer is that the land in question has to become the state owned land through requisition first, and then it may be released into the urban market. The state or government is the only legal provider of land for urban construction in the first degree urban land market. In the context of urbanization in which huge amount of land has to be transferred from agricultural and rural utilization into urban construction, the essence of the land regime is the state monopoly of the first degree urban land market.

Since China is a huge country with government system divided into five basic levels, in practice it is the local governments at county or municipal city levels have to take assignments to requisition land from farmers. Requisition of land at relatively cheap cost for urban investments has become profitable job for many local governments. In the rapid economic growth propelled by the new-round urbanization and industrialization, the incentives to requisition land and invest became even stronger. Local governments have motivation to propel local economic growth by using the actual authority of land acquisition they possess. However, the process may harm the farmer's interests and make the economic overheating problems even more exacerbated. Keeping the land regime unchanged, the government chose to give more vigorous quantitative regulation on land supply as a tool to adjust investment demand and aggregate demand. As a result, "tap of land supply" became a major MAC policy instrument.

In 2003, a new round of economic growth came along with the increase of the rural land being transferred into urban construction. "Land-supply-financing"[15] by local governments became a convenient vehicle to boost local investment and economy. Driven by MAC objective to deal with economic overheating, the central government decided to introduce tough regulation. On April 27th 2004, the State Council issued a document to launch screening and rectifying work on fixed asset investment projects,

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[14] See "Business Sohu", "CBRC Chief Mingkang LIU Suggest Strengthening Control on Five Major Credit Risks", http://www.cbrc.gov.cn/chinese/info/yjhjj/.

[15] Land-supply-financing" includes the whole cycle of "land-land acquisition of construction land-the transfer of land-use right to institutions and individual from government-land evaluation-mortgage and loan-investment formed". CCER's research group investigated the situation thoroughly in "Land institution, Urbanization, and Macro-regulation".(June 14th, 2004)

especially projects in sectors of steel, electrolytic aluminum, cement, office buildings and training centers for CCP and government organizations, rapid urban rail transit system, golf fields, exhibition center, logistics park, shopping mall, and all the other projects launched since 2004 (General Office of the State Council, 2004a) On April 29th, the State Council issued a plain telegram to arrange the improvement and rectification in the land market. During the rectification, the converting to non-farm land from farmland was frozen for 6 months throughout the country. After half a year, the rectification work would be examined in each province. Only those that passed the inspection can restart land transfer[16] (General Office of the State Council, 2004b).

On October 28th 2004, the State Council called in a telephone and video conference, issuing "Decision of the State Council on Deepening Reform and Strengthening Land Management", which would be implemented since November 1st. The essential aim of this document was to strengthen land management, to strict land-approval process, to strictly protect farmland, to improve land-acquisition procedures, land compensation and resettlement rules, and to accelerate the establishment and improvement of coordination and arbitration mechanism for land acquisition (The State Council, 2004).

4-7. Dealing with Major Legal Cases

A highlight in 2004 tough MAC policy was the investigation and punishment to a private enterprise named Tieben located in Southern Jiangsu province by the State Council. On April 28th 2004, "CCTV News" reported the decision of punishment. Then "Focus Interview" reported the event in two consecutive days. People's Daily also published editorial commentary article on this event. The punished project was a large-scale steel project located in Xinbei District of Changzhou and Yangzhou City of Zhenjiang, which began construction in June 2003. The designed capacity was 8.4 million tons of steel, and the estimated budget was 1.059 billion yuan. This project was stopped in March 2004 and its legal representative and some executives were arrested. A few local officials and some then principals of state-owned banks were imposed upon an administrative sanction.

On April 30th 2004, the General Office of State Council publicized "Bulletin of Sanction on Jiangsu Tieben Limited Who Builds Steel Project in Violation of Laws and Regulations" (General Office of the State Council, 2004c) to provide official explanation for this case. The document stressed that "the serious investigation and correction by the State Council, and its urge on Jiangsu Province and relevant departments to seriously punish the relevant liable persons showed the resolution of the Party center and the State Council to strictly enforce financial and economic laws and discipline. This is an important measure for intensifying MAC and getting solutions into place at the present time. All districts and departments should learn a lesson from this event, draw inferences about other cases from this instance, further implement the principles and policies which were presented after an analysis of China's economic situation by the recent meeting of the Central Political Bureau, and align your thoughts with the sound judgment of the Party center and the State Council on current economic situation, with the central economic work deployment, and with the adoption and implement the scientific development concept and correct political perspective as well".

[16] Liu and Cai (2005) pointed out that since the release of land title certificates and mortgage loans by land title certificates were stopped, the capital threshold was raised.

5. Tightening Policies in the Second Phase of Boom (the Second Half 2005- the First Half 2008)

The tightening policies around 2004 produced some effects quickly. The annual growth rate of broad money fell back to about 14% in the second half 2004. The year-on-year growth rate of investment fell to 11% in May 2004, and maintained a relatively low level around 20% in the second half 2004. However, the growth rate of money and investment rose again in the second half of 2005 since the MAC measures in 2004 did not fully solve the underlying driven force and mechanism of rapid growth of aggregate demand with overheating and inflation tendencies.

In the second half 2005, the growth rate of broad money rose to18%, the growth rate of investment in real terms reached a high level of 25%, and the growth rate of nominal investment climbed over 30%. The tough controlling domestic investment in 2004 stimulated the relative growth of external demand through short term switching effects. China's trade surplus grew to 102.1 billion dollars in 2005 from 32.8 billion dollars in 2004, with a growth rate of 211%[17]. Giving the circumstances in which the economic growth rate went even higher with asset market volatility becoming more intensified during 2006-2007, the Chinese government adopted even more diverse MAC instruments in handling the situation.

5-1. Monetary Policy

The one-year benchmark lending rate was raised to 5.85% from 5.58% in April 2006, and reached 7.47% in February 2008 after several hikes. The one-year deposit rate was increased to 2.52% from 2.25% in August 2006, and reached 4.14% in December 2007 after multiple hikes. RRR was raised to 8% in August 2007, and reached 17.5% one year later after several hikes. The scale of central bank bill expanded with the outstanding amount of the bills reached an unprecedented level of about 4000 billion yuan in the first half of 2008.

5-2. Exchange Rate Policy

After lengthy hotly debates on RMB exchange rate policy from 2003 both inside and outside China, the Chinese government decided to exit the pegged exchange rate regime introduced in 1998 as a part of anti-Asian financial crisis policy package. In July 2005, RMB exited from the pegged regime and her exchange rate versus US dollar fell from 8.28 to 8.06, appreciated by 2.73%. RMB exchange rate further declined to 7.82 towards the end of 2006, with 3.2% appreciation in 2006. RMB witnessed 5.4% appreciation in 2007, with parity fell to about 7.42 at the end of 2007. For the first nine months in 2008, the exchange rate fell to 6.83, with an appreciation of 8.64%. .

Depending upon choice of different baskets of currencies and their weights as well as different general price indexes, changes in effective nominal and real exchanges rates (NEER and REER) for RMB could present different results.

According to the BIS data, NEER for RMB had a 7% appreciation in 2005, but that in early 2006 and late 2007 were almost the same, although there were modest ups and downs within the periods. But in 2008, RMB had a big appreciation of approximately

[17] In 2004, China's trade surplus grew to 32.1 billion dollars from 25.5 billion in 2003 with a growth rate of 26.4%, breaking the record of 30.2 billion dollars in 2002. Then in 2006, the trade surplus reached 177.5 billion dollars, with a growth rate of 73.8%. The 2007 surplus was 262 billion dollars, with a growth rate of 77.6%. And the 2008 surplus reached 297.3 billion, with a growth rate of 13.5%.

14.5%, and followed by a significant depreciation of about 7% through September 2009. REER for RMB had an appreciation of 6.5% in 2005, a depreciation of 1% in 2006, an appreciation of 4.6%, a significant appreciation of 13% in 2008, and a depreciation of about 4.8% in the first nine months on 2009.

5-3. Fiscal Policy

The share of fiscal budget deficit as a proportion of GDP fell to 1.6% in 2005 from 2.6% in 2002. In 2008, the share decreased further to 0.6%. The share of the annual treasury bonds issued as a proportion of GDP rose to 4.2% in 2006 from 3.8% in 2005, and then fell to 2.7% in the following two years. The reduction of export VAT (value added tax) rebates was used as a tool to deal with the external disequilibrium. The total amount of rebating tax rose to 198.9 billion yuan in 2003 from 105 billion yuan in 2000, and then reached 487.7 billion in 2006, 586.6 billion in 2008, and 648.7 billion in 2009. The proportion of rebating tax as a proportion of GDP rose to 1.46% in 2003 from 1.06% in 2000, then reached 2.3% 2006, and fell to 1.87% in 2008 and 1.93% in 2009.

5-4. Industrial Policy

The relevant government ministries continued to control investment in the concept of preventing overcapacity though empirical evidence emerged suggests the problems of overcapacity in selected sectors projected by ministries were much less serious or even did not exist (Lu 2009a). In November 2005, relevant ministries released a new document to curb blind investment in copper smelting industry, raising the capital ratio requirement to 35% and above from 20% and above. In December 2005, relevant authorities released "Catalog of Guidance in Industrial Structural Adjustment", which was "composed by three kinds of catalog including 'to be encouraged', 'to be restrained', and 'to be eliminated'".

The six criteria for identifying sectors which should be restrained included "seriously low-level redundant construction" and "distinct overcapacity." Article 3 of the document required that "Investment must be forbidden in new projects which fall into the restrained catalog. Investment administrative departments must not accept examination and approval, authorization of investment projects in these sectors. Financial institutions must not provide loans to these projects. Other government departments such as land administrative departments, urban planning and building administrations, environmental protection departments, quality inspection departments, fire departments, customs, and industrial and commercial administrative bureau must not allow start of the projects in these sectors. Relevant units and persons will be held for responsible if there are any projects supported by investment or financing that are against the policies.

As for the existing production capacity which falls into the restricted category, government will allow revamp and upgrade within a specified period of time. Financial institutions will continue to support them according to credit principle. Relevant state authorities should provide tailored guidelines according to the requirements to optimize and upgrade industrial structure and the principle of selecting the superior while eliminating the inferior." (The State Council, 2005a)

On March 12th 2006, the State Council issued the No.11 Document on the regulation of excess capacity. This document pointed out that "there has been evident overcapacity in the following six sectors: steel, electrolytic aluminum, calcium carbide, ferroalloy, coke, and automobile. Potential overcapacity exists in another four sectors:

cement, coal, electrical power, and textile." The key measures of promoting industrial restructuring in overcapacity industries were then formulated. The first and second articles require the ministries involved to "prevent the rebound of investment in fixed assets" and "strictly control the launching of new projects" (The State Council, 2006a).

In June 2006 relevant authorities released "Proposals on the Heavy Regulation on Investment in Fixed Assets and Strict Control of New Projects", stressing that the government would strengthen its control on new projects in sectors of steel, electrolytic aluminum, calcium carbide, ferroalloy, coke, automobile, cement, coal, electrical power, and textile, and that it will raise market access requirements concerning environmental protection, land, safety, energy consumption, water consumption, production quality, technology, and the scale so as to promote the industrial restructuring in overcapacity industries (National Development and Reform Commission, Ministry of Land and Resources, China Banking Regulatory Commission, 2006).

The strong policy measures are implemented on the assumption that serious problems of overcapacity will be prominent in near future if the investment will not be harnessed using sectoral regulation policies. Industrial policies in this area in 2007 still focused on the control of newly invested projects. On November 17th 2007, the General Office of the State Council issued the No. 64 Document, stressing that "the control on new projects is a key point of investment management and an important measure of MAC".(General Office of the State Council, 2007)

5-5. Real Estate Policy

In a normal market economy, growth of real estate industry has obvious macro-economic implications since it facilitates a large scale of investment with a high degree of inter-industry linkage and a close relationship with credit market and monetary situation. Marked by the No. 23 Document in 1998 ("Notification On the Further Deepening of Reform In Urban Housing Regime and On the Speeding up of Housing Construction"), the reform of the urban housing regime in China pushed the real estate industry into a new phase of development (The State Council, 1998b). Real estate market has developed into a key sector with an increasingly close link with the overall economy.

The reform of the urban housing market contributed significantly to the rapid development of real estate industry. Monthly sales area of commercial housing rose to 88.32 million m^2 in late 2003 from 26.18 million in early 1998, with an increase of 62 million, which was about 2.4 times compared with that in the base year. Under the relatively sluggish macroeconomic conditions at the turn of the century, real estate prices were relatively stable. The average price of national commercial housing was 2369 yuan/m^2 in late 2002, which is approximately the same with 2359 yuan/m^2 in early 1997.

The situation changed substantially when China's macro-economy entered the new phase of boom growth. In late 2004, monthly sales area of commercial housing reached 14.271 million m^2, with a 61.6% increase of 54.39 million m^2 from that in late 2003. In late 2007, monthly sales area reached 34.037 million square meters, with a 2.86-fold increase of 252.05 million m^2 from late 2003. In an overheating and inflationary macro-economic environment, housing prices began rising steadily. In late 2004, the average price of national commercial housing was 2918 yuan/m^2, which was 24% higher than the price in late 2002. In October 2007, the average price of national commercial housing reached a peak value of 4218 yuan/m^2, with an increase of 44.6% from late 2004, and 78% from late 2002. Housing price hikes not only became integral part of macro-economic imbalance, but also triggered more and more attention and criticism from the general public, the government started to introduce more vigorous measures in managing housing demand and controlling prices. Campaign measures against housing price hikes became important component of MAC policy in this period.

On March 26th 2005, the State Council promulgated the old "eight measures" which was a regulatory document for real estate market (The State Council, 2005b). Besides urging local governments and relevant authorities to attach great importance to the stability of housing price and the adjustment and improvement of housing supply structure, the document restricted scale of housing demolition i.e., relocation due to construction projects so as to controlling excessive growth of the so-called "passive housing demand". On April 28th 2005, the new "eight measures" were released, which reaffirmed the main part of the old ones, and requested the ministries and local governments to intensify regulation on land supply, to implement strict land management, and to strengthen the regulation of real estate transactions[18](The State Council, 2005c).

In May 2006, the executive meeting of the State Council promulgated the "Six Measures of State Council" to promote healthy development of real estate sector (The State Council, 2006b). The first measure was to adjust the structure of housing supply. The second was to strengthen supervision over the entire course of real estate development and construction, to stop unauthorized change of projects, illegal transactions, inventory accumulation and the artificially bidding up of housing prices. The third was to speed up the construction of renting-affordable housing system. The fourth was to regulate provision of economical housing. Other measures included nurturing development of secondary housing market and housing rental market more vigorously, and addressing the housing problem of low-income families.

In late May 2006, nine relevant ministries introduced the "dual-70% requirements" to regulate housing project in real estate market. According to the new regulation, any residential housing development projects must obey two guidelines. Firstly, the proportion of flats whose area was below 90 m^2 must not be lower than 70% of total flats newly built. Secondly, the supply of land for renting affordable housing, economical housing, and small and medium-sized condominiums must not be lower than 70% of the total supply of residential land. The transaction of housing properties which was purchased within 5 years would be subject to full sales tax (General Office of the State Council, 2006). On July 24th, five ministries promulgated the "restricting order for foreign investment in real estate", strengthening regulation on foreign investment into real estate enterprises and overseas institution or individual purchase of housing (Ministry of Construction, et al, 2006). On July 26th, the State Tax Administration announced the imposition of personal income tax on the transfer of second-hand house (State Administration of Taxation, 2006).

On September 27th 2007, People's Bank of China (PBoC) and CBRC introduced the new policy to raise initial down-payment ratio for mortgage loans and implement "differential mortgage interest rates regime". According to the new policy, down-payment ratio of housing loans must not be below 20% for the first purchase of owner used housing if the building area of dwelling size was below 90 m^2, and not below 30% if the

[18] The new "eight measures" were not formally distributed.

area was above 90 m^2.The policy also required that the down-payment ratio of housing loans must not be below 40% for a second or more purchase, and that the lending rate of housing mortgage must not below 1.1 times of the benchmark lending rate at the same time and for the same grade. The down-payment ratio and the lending rate would automatically increase for applicants who purchased more and more units of flats (People's Bank of China, China Banking Regulatory Commission, 2007).

5-6. Credit Regulation Policy

In 2006, the growth rate of fixed capital investment maintained a high level, driving long-term loans to grow fast. From January to late September, the year-on-year growth rates of medium-term and long-term loans rose all the way to 21.4% from 16.2%. This growth rate was faster than the growth rate of the total loan by 6.9 percentage points. The total medium-term and long-term loans reached at 10.9 trillion yuan by Sep. 2006. CBRC stressed at a briefing meeting on the fourth quarter's financial situation held in the October 2006 that banking and financial institutions should continue to implement MAC measures to maintain the healthy function and development of banking industry, and promote national economy to grow healthily and continuously. In this open briefing, CBRC also warned that "the growth rates of medium-term and long-term loans are relatively high, and this has caused pressure on the control of total loan amount, increased the difficulty for banks to improve their loan structure, and raised the potential credit and liquidity risks". The conference required relevant institutions to be alert about credit-expansion risk, and strictly control their medium-term and long-term loans. Liu Mingkang, the then president of CBRC said that the weak links in the risk management of banks had been exposed further, and the competence of Chinese banks in fending off the operational risks and market risks was relatively weak. He also said that "the market risks caused by the change of interest, exchange rate, stock prices or commodity price, and the increase of participation of banks into mergers and acquisitions at home and abroad has become one of the main risks faced by the Chinese banking industry".

The conference announced that CBRC would continue to implement MAC measures so as to maintain a favorable credit-issuing rhythm. The extensive management style which focused simply on the scale of deposits and loans and the market share was required to be changed. All institutions were urged to establish a performance evaluation system which would focus on economic added value and the risk-adjusted rate of return on capital in order to form efficient mechanisms for resource allocation. The conference asked banks to "strengthen their control on disqualifying and high-risk loans, do well in guarding against the credit risk", and focus on strengthening their inspection and management on disqualifying and high-risk loans in real estate industry. Specially, "fake mortgages", packaging loans, entrusted loans, land reserve, and disqualifying and high-risk loans to "high energy consumption, high pollution and excess capacity" enterprises were emphasized as sources of key potential problems. The banks were required to "keep a close eye on the rebound NPLs in the process of industrial reconstructing".[19]

5-7. Land Policy

In around 2006 and 2007, the "land-supply-tap" was still tightened. On August 31st

[19] See Business Sohu, "Mingkang Liu Stressed: Continue Implementing MAC Policies and Maintain the Stability and Development of Banking Industry", http://business.sohu.com/20061026/n246016006.shtml.

2006, the State Council issued the No. 31 Document with the title of "Notice on Relevant Questions about Strengthening Land Adjustment and Control" to strengthen regulation of land supply vigorously. The responsibility on land management and farmland reservation was assigned. Local governments were required to earnestly safeguard the long-term livelihood for farmers whose land was taken away for urban construction, and to improve management on income and expenditure concerning sell of the land. Ministry of Finance, State Administration of Taxation, and Ministry of Land and Resources were urged to adjust the policies about relevant taxes and fees on construction land. The State Council also noted that the minimum price regulation on the industrial land transferred will be introduced into each region, prohibit the transfer of farmland into construction, strengthen supervision and inspection on the management of land, and seriously punish violations of laws and regulations concerning land use (The State Council, 2006c). On November 7th 2006, Ministry of Finance, Ministry of Land and Resources, People's Bank of China co-issued the "Notice on the Adjustment of Policies Concerning Payments for the Use of New Construction Land", making a big change in relevant policies so as to curb excessive expansion in land use for financial purpose and strengthen the protection of farmland. (Ministry of Finance, Ministry of Land and Resources, People's Bank of China, 2007)

On March 29th 2007, The Ministry of Construction and other seven ministries co-issued the "Notice on the Work Plan of a Special Rectification of Market Order in Real Estate Sector". It was announced that the government would launch a special rectification which would last for one year so as to strengthen regulation on real estate market, implement audits and inspections on real estate developers, crack down illegal activities and corruptions, and establish a long-term mechanism to promote the healthy development of real estate industry (Ministry of Construction et al, 2007).

5-8. Stock Market Policy

Formation and evolution of capital market are important parts in China's institutional transition towards the model of the "socialism market economy". Since China's capital market was established in the early 1990s, the market has experienced continuous structural changes with intensive and multiple regulations. The government policies in managing and regulating the capital market are driven not only by the long-term goal of nurturing but also by short-term motivation of controlling price volatility consistent with macro-economic objectives.

In the current stage of economic development in China, rapid growth of productivity in tradable sector makes the asset markets including stock market particularly vulnerable to monetary shocks. Constrained in fully using exchange and interest policy to address monetary expansion effectively and flexibly, China's government regulatory agency on capital market had to use alternative policy instruments in dealing with price volatility in capital market. Stamp tax on transaction of shares, changes in frequency in approval of IPO, and even suspension and resumption of IPO all may be used as policy instruments of MAC in regulating capital markets.

In the recent round of inflation around 2007, the hike of the stock market price figured prominently. In dealing with excessive volatility of the stock market, the Ministry of Finance announced at midnight of May 29th 2007 that the stamp tax rate for stock market transaction was raised from 0.1% to 0.3%. But this measure only produced temporary effect in bringing down the Shanghai Index from 4309 in May to 4009 in June. Climax of bullish capital market occurred in October 2007, Shanghai Stock Index reached at 6200, quadrupling within two years from less than 1200 in early 2005. As more tightening up MAC policies especially monetary and exchange rate policy were implemented, the Shanghai index fall drastically to 1816 in October 2008.

5-9. Pork Policy

China's pork price rose sharply between the summer and spring in 2007, as a result of both relative price adjustment in pork market and show up of overall inflation pressures. For example, the pork price in Beijing was only 10-12 yuan/kg in March and April of 2007, but it rose to about 16 yuan/kg in May, 18 yuan/kg in July, and eventually 20-24 yuan/kg in mid-August.

The Chinese government responded quickly to the pork price changes. Premier Wen Jiabao put forward seven points of instruction on live-pig production and pork supply when he was inspecting Shaanxi villages specialized in live-pork production in late May 2007. He requested relevant ministries to take all measures to boost live-pig production, including paying allowance for the raise of sows, and maintaining the capacity of sow production. He urged that relevant authorities should do a good job in organizing the supply of pork and subsidiary food. Procurement should be done to increase market supply so as to prevent the lack of supply and out of stock. He pointed out that the ethanol production using corn as input should be strictly controlled so as to securing sufficient supply of corn in feedstuff sector. Fourthly, the inspection and management of quality and price should be strengthened, a good market order must be maintained, inspection and quarantine work must be well done, and bidding up prices through illegal means must be prohibited.[20]

After Premier Wen's instruction, an inter-ministries emergency leading group was created by seven central government agencies including NDRC, Ministry of Finance, Ministry of Agriculture, Ministry of Commerce, Administration of Quality Supervision, Inspection and Quarantine, Administration of Industry and Commerce etc to take the assignment. The member officials of the leading group met once every week to monitor market development and design policy measures.

On July 30th the State Council released "Opinions of the State Council on Promoting the Production and Development of Live Pigs and Stabilizing the Market Supply" (The State Council, 2007). In this document, the State Council urged relevant departments to strengthen their support for live-pig production from the following aspects: the establishment of a subsidy system and promotion of insurance for reproducible sows, the completeness of breed system for high quality live-pig, the establishment of reward policies on pig-export from counties (or farms) rich in live-pigs, and the support of standardized raise of live-pigs. The State Council also requested relevant ministries to establish and complete the public service system of disease prevention for live-pigs, to strengthen market regulation, to look after the livelihood of low-income groups and college students, to improve the pork-reserve system, to improve the statistical work of consumes in live-pigs and other animal products, and to guide the domestic and international media correctly. (The State Council, 2007)

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[20] See Xinhuanet, "Premier Wen Investigating Live Pig Production and Pork Supply in Shaanxi", http://news.xinhuanet.com/politics/2007-05/27/content_6159463.htm.

In August, the Ministry of Finance released "Interim Measures of Management on the Insurance and Allowance for Producible Sows". The objective of the policy was to maintain the productivity of producible sows, to further stabilize the supply in live-pig market, to establish a long-term mechanism which is good to the healthy development of lie-pig industry, and to guarantee the life quality of the people. An earmarked fund was provided to set up a nationwide insurance system to subsidize producible sows in order to encourage enthusiasm of production for pig farmers (Ministry of Finance, 2007).

The surging pork price and subsequent policy responses by the government attracted intensive attention from the general public and mass media. Since China's macro-economy in 2007 faced overheated growth and inflationary pressure, and pork as a major item of foodstuff assumes significant share in consumer price index, so an influential view was that the hike of pork price was the main cause of cost-pushed inflation. The production of live-pigs was taken seriously at that time because on one hand, the rise of pork price had a close relationship with the people's livelihood, and on the other hand, the rise of pork price was viewed as a main cause of cost-pushed inflation. Intervention in live-pig production was widely interpreted as part of MAC policy in that particular episode of macro-economic overheating.

5-10. Price-Control Policy

The recent excessive growth of macro-economy reached a climax in 2007 when growth rate of GDP rose to 13%, the highest since 1994. Trade surplus of the same year rose to 262 billion dollars at the growth rate of 77.6%, after years of high-speed growth. Inflation pressure was also mounting: the year-on-year growth rates of CPI, PPI, and RMPI in December 2007 reached 6.5%, 5.4%, and 8.1% respectively.

In order to prevent the inflationary situation going out of hand, the government decided to control price directly using administrative power. At the beginning of 2008, NDRC issued the No.58 Order to introduce regulatory measures to control prices of some important goods and services all across the country. According to the new regulation, all production and distribution enterprise over certain level of scale must report the matter for record beforehand on any price adjustment. The commodities subject to the price regulation include processed grain and cereal product, edible vegetable oil, pork, mutton as well as their products, dairy food, eggs, liquefied petroleum gas and other important goods and services. It is also stated by the new policy that each provincial, autonomous-regional, and municipal government has the right to determine the specific items of the important goods and services within the preceding scope in its jurisdiction. And the items should be reported to NDRC by the price authorities of provincial, autonomous-regional, or municipal governments" (National Development and Reform Committee, 2008).

6. The V-Shape Fluctuation and MAC Policies (the Second Half of 2008 to the early 2010)

Various strong MAC measures such as rapid appreciation of RMB, tightening credit, and strengthening investment management aiming at controlling macro-economic overheating and inflation around 2007 finally reduced the speed of economic growth in 2008. Drastic decline of export as a result of the global financial crisis further dragged down the aggregate demand. The year over year growth rate of GDP was only 7.21% while the quarter over quarter growth rate was even -4.96% in the fourth quarter of 2008.

This was the first time for China to face the deficient aggregate demand since 2003. Coastal provinces with relatively high degree of external sectors particularly felt pressures from temporarily drastic slowdown of economic activities and growing unemployment.

China government decided quickly to make a U-turn in MAC stance towards the end of 2008. The previously implemented tightening up measures was completely reversed and full-fledged stimulus policy package was introduced. The counter-crisis MAC policies produced remarkable results in relatively short period of time. Rapid expansion of money and credit driven by the so-called 4 trillion fiscal stimulus package quickly produced results not only in recovering aggregate demand but also quickly coming-back of inflation expectation in the second half of 2009. Though statement of the Chinese pro-active MAC policy has been largely maintained, actual policy conduct and operation went significant revision and adjustment towards tightening up from the second half of 2009.

Drastic shift of MAC policy necessitated by dramatic changes in macro-economic situation and turbulent external environment provides again highlights characteristics of MAC in China. This section divided into two parts. The first part looks at major policy measures in the stimulus package implemented from the late 2008. The second part observes partial exit steps of MAC policies started from the summer and autumn season in 2009.

6-1. China's stimulus policy package

The official title of the stimulus MAC policy introduced in November 2008 was "a proactive fiscal policy and an appropriate loose monetary policy". It was also called "the four trillion yuan program" since the total resources will be mobilized through both public and private sectors was estimated at about 4 trillion Chinese yuan[21]. The major policy measures in the package are as follows.

First, as for money and exchange rate policies, the lending rate was cut to 5.29% in January 2009 from 7.41% in August 2008, the deposit rate declined to 2.25% in January 2009 from 4.41% in September 2008, and RRR fell to 14.5% in February 2009 from 17.5% in August 2007. The regulatory measures on credit expansion which came into force to control inflation in 2007 were abolished in November 2008. In October 2008, China again pegged to US Dollars at around 6.82 yuan per dollar.

Secondly, in the area of fiscal policies, an additional treasury bonds investment of 100 billion yuan was added in the last quarter of 2008. The Chinese central government committed to spend total 1.08 trillion yuan in the following two years. Together with the resources from match funds from local governments, private investments, credit expansion from financial system, total fund mobilized in the whole stimulus package was estimated to reach at 4 trillion yuan. Existing close monitor and heavy regulation on various local investment and financing platforms were relaxed considerably so as to helping local governments have access sufficient resources to implement stimulus package.

Thirdly, active industrial policies were implemented as part of stimulus package. During the 41 days between January 14th 2009 and February 25th 2009, the State

[21] See Xinhuanet, "Premier Wen Chaired a State Council Executive Meeting Introducing 10 Measures Expanding Domestic Demand" , http://news.xinhuanet.com/newscenter/2008-11/09/content_10331258_1.htm.

Council held six executive meetings and promulgated plans of industrial policies to vitalize ten industries. The ten sectors were steel, automobile, textile, equipment manufacturing, shipbuilding, electronics and information, light industry, petrochemical, non-ferrous metals, and logistics. Various measures such as tax cut, direct investment, industrial guidance were adopted helping targeted enterprises in the sectors to expand their market, to upgrade their technology, and to complete industrial reconstruction[22].

Fourthly, in order to provided favorable support for real estate sector. The State Council issued the No. 126 Document on December 8th, 2008. On the basis of the document, residents who purchase their home flats will receive additional favorable treatment, the urban low-income purchasing low-rent flat and economic flat will get credit support (General Office of the State Council, 2008a). Another document No.131 issued on December 20th relaxed the regulation on commercial banks in terms of lending mortgages for the second home purchases (General Office of the State Council, 2008b). This document was interpreted by the market as actually abolishing the policy of "differential interest rate for the second or more flat purchases" introduced in September 2007. On April 29th 2010, the executive meeting of the State Council decided to re-examine the regulation on the required own capital ratio for the real estate developer. On May 27th the State Council made a notification to cut the lowest capital ratio of low-income housing and commodity housing to 20% from 35% introduced in 2004, thus back to the 1996 level (The State Council, 2009a).

Fifthly, capital market regulation again changed in an unusual manner responding to special macro-economic situation. As mentioned above, since CSRC (China Securities Regulatory Commission) in charge of examining and setting timetables for enterprises with intention of IPO, suspension and resumption of IPO as well as adjustments with regard frequency and scale of IPO were in part policy instruments. For example, China's capital market as experienced five suspensions and resumption of IPO in her 20-year history. While it is acknowledged that long-run institutional and mechanism design of capital market and short-term fluctuations of stock prices played important role, macro-economic situation also affect CSRC decision significantly, making regulation measures on IPO part of MAC policy. In view of slowdown of economic growth rate and the fall of stock market in summer and autumn of 2008, CSRC stopped temporarily suspended new IPO for capital markets through stopping examination the cases of IPO. New IPO in China's capital market will not resume until June 2009.

Sixth, as for banking regulation which was a major MAC policy tool, CBRC released the document of 10 points of Measures on January 10th 2009 which was entitled "Notification on the Adjustment of Credit Regulatory Policies and Promotion of Healthy Development of Economy" (China Banking Regulatory Commission, 2009a). CBRC adjusted the policies concerning project-financing credit, restructuring credit, credit for mergers and acquisitions etc. As commented by a senior official CBRC, thanks to efforts from CBRC and other parties concerned, the Chinese credit supply rose to 1.5 trillion yuan per month in the first quarter of 2009 from 0.47 trillion in the last quarter of 2008, which supported the quarter over quarter growth rate of GDP in China to grow to 18.0% in the second quarter of 2009 from 4.3% in the first quarter.

[22] See Xinhuanet, "Focusing the Industrial Vitalizing Program in Ten Crucial Sectors ", http://news.xinhuanet.com/fortune/2009-01/15/content_10661510.htm.

6-2. Excessive expansion and partial exit measures

Thanks to the strong economic fundamentals plus the effects of the unusual stimulus policies, China's macro-economy recovered stronger and faster than expected. At the end of 2008 and the early 2009, selected economic indicators such as the stock market price, outputs of steel, electricity, automobile etc reversed the decline in absolute values or growth rates. Different from the mainstream predictions that the aggregate-demand recovery was not firmly grounded, hike of China's GDP growth rate continued and reached 11.9% in the first quarter of 2010.

The strong recovery of China's macro-economy was driven by tremendous expansion of money and loans through banking system. After growth rates of both broad money and credit touched at the bottom at 14.73% and 13.22% respectively in November 2008, they started to bounced back very rapidly afterwards. Their growth rates reached at 28.38% and 31.88% by June 2009 and further climbed at 29.64% and 33.86% respectively in November 2009.

The excessive expansion of broad money inevitably introduced significant inflation pressures for the macro-economy. The Shanghai-A-share index hiked from 1816 in October 2008 to 3582 in July 2009. Average housing price increased from 3391 yuan per M2 in September 2008 to 4302 in December 2008 and 4527 in March 2009, 4700 in June 2009 and the peaked at 5215 in February 2010 that is 54% higher than the trough level before the crisis. Reverse of consumer price index and producer price index lagged behind significantly than asset prices. Month over month CPI started to reverse the decline trend and became positive in the first quarter 2009 and PPI returned to positive in the summer 2009. Year over year CPI and PPI started to reverse the decline trend in the summer 2009 and resume to positive values at the early 2010.

The mixed picture of macro-economic performance as a response to the massive stimulus policy caused a lot of controversies in terms of how to assess the situation of China economy and conduct of MAC policies. If one was occupied by the possible double dips scenarios about the world economy and fragile foundation for China's economic recovery, the stimulus policy should be maintained. On the contrary, if one gave higher weight of observation on enormous monetary expansion, strong hike of growth rates of real economy as well as excessive volatility of asset market, one worried the inflation pressures and favored adjustment of MAC in reducing the dosage of stimulus measures.

The stimulus MAC policy stance has not been abandoned until the mid-2010 when this paper is drafting. For example, the communiqué announced by the Working meeting on economic affairs of the Central Committee of the Chinese Communist Party (CCCCP) committed "to continue pro-active fiscal policy and appropriate relaxed monetary policy, handle well with intensity, rhythm and focus of policy implementation" (Working meeting on economic affairs of CCCCP, 5-7 Dec. 2009). Premier Wen Jiabao said in his annual Government Work Report in March 2010 that his government will "continue pro-active fiscal policy and appropriate relaxed monetary policy, to maintain continuity and stability of policies, to enhance pertinence and flexibility of policies, to handle carefully with intensity, rhythm and focus of policy implementation" (Wen Jiabao, 2010). But the policy conduct was modified or even reversed from the second half 2009 so as to control excessive monetary expansion and built-up of inflation pressures.

In line with the spirit of MAC policy, the “exit steps with Chinese characteristic” was implemented with mixture of parameter instruments with aggregate orientation and tools of industrial policy with sectoral orientation. Partial adjustments on stimulus policy began from summer 2009 and experienced three stage of evolution. First, policy adjustment by PBoC, CBRC, and CSRC in summer 2009 aiming at controlling excessive monetary expansion and price surge of capital market. Second, risks of overcapacity in selected sectors were reiterated and a new campaign dealing with the overcapacity were designed and implemented in August and September of 2009. Third, several rounds of unprecedented policy measures were introduced vigorously in order to harness price hike in housing market that triggered most of public discontent.

6-2-1. Policy Adjustment by PBoC, CBRC, and CSRC in Summer 2009

Acknowledging risks of excessive monetary expansion in the first half of 2009, PBoC, the Chinese Central Bank PBoC started to employ various policy instruments including open market operations (OMO) to reduce the monetary expansion. Firstly, PBoC resumed and increase repurchasing and issue of central bank bills. For instance, on June 30th, a routine day of OMO, the repurchase operation came back after its suspension in late April. For another instance, on July 9th, the one-year Central Bank Bill came back into use. Second, the market witnessed growth of bill yields. For example, from middle July to middle August, the yields of repurchase and central bank bills by more than 20 base points. Third, PBoC intensified its efforts to persuade banks whose credit expanded too rapidly to slow down their market expansion. It was even warned that selected targeted banks will be punished through directly issuing bills at low regulated yields.

During summer of 2009, CBRC introduced new measures in controlling excessive credit expansion in the first half that year. In June, CBRC re-stressed importance of credit supervision and regulation. CBRC release two documents to reiterate that credit supply must be used to fulfill the effective demand from actual economy, urging commercial banks to strengthen their examination and investigation on projects applying for credit and implement lending standards of mortgages vigorously. In middle July, on the third briefing meeting of economic and financial situation of 2009, CBRC stressed that four new kinds of risks should be paid special attention: fake or inadequate capital provision, bill financing risk, too high concentration of credit and growth of real estate sectors. The meeting required banks to strengthen their risk management and raise the ratio of provision for potential bad loans to above 150%. In August, CBRC proposed to reduce the proportion of junior debenture that had been allowed to be calculated as bank’s own capital (China Banking Regulatory Commission, 2009b). Should this proposal become formal policy, it will impose tightening up effects on credit capacity similar with raising RRR by one or two percentage points.

As the economy recovered and the credit expanded rapidly, Shanghai-A-share index increased to 3123 in June and further to over 3500 in late July 2009 from a low point of 1816 in October 2008. The rise of stock market performance clearly turned to the direction of possible overvaluation of stock market and even elements of bubbles. Under this situation, China Security Regulation Commission (CSRC) sped up the procedures to resume IPO that had been stopped by CSRC from autumn 2008. On 22 May, CSRC solicited opinions about the reform on IPO mechanism from the general public. The guidance of the reform on IPO mechanism was formally unveiled on June 10th. On June

18th, Guilin Sanjin Pharmaceutical received formal approval from CSRC to issue IPO and went through IPO at the end of June. On July 1st, the second IPO, Zhejiang Wanma Cable entered the online purchase. On July 29th, China State Construction Engineering began to flow in the Shanghai stock market that was the biggest single IPO in recent years. As indicated by statistics, the total 21 IPOs were made in the Chinese stock markets during a relatively short period time from the end June to the late August. The total fund raised through IPOs during the period was 71.3 billion yuan, roughly equaling to 70% of the total amount in 2008.

As GDP growth rate returned to double figures in the early 2010 and inflationary pressure became more apparent, PBoC raised required reserve ratio (RRR) three times on January 18th, February 25th, and May 2nd in 2010 with an increment of 0.5% each time. The level of RRR imposed on large commercial banks reached 17% by the mid-2010, second only to the peak value of 17.5% in the previous round of tightening up policies. Besides, PBoC has been withdrawing liquidity from the economy through frequent OMOs in 2010. Total money withdrawn by OMOs reached at the amount of 1.1 trillion yuan during a period of ten weeks till April 30th.

6-2-2. Reiterating Overcapacity and Management Policies

Of the stimulus MAC policies aiming to expand the aggregate demand implemented from the end of 2008 to the first half of 2009, measures targeting at supporting and revitalizing ten sectors including steel, machinery, ship-building, logistics etc figured prominently. Although the industrial rejuvenation plan still attached importance to restrict excess production capacity, the policy priority focused on promotion of effective demand for these sectors through provision of tax subsidies and investment funds. As the V-shape rebound of aggregate demand became clear, the excessive growth of money and credit resulted in inflation expectations[23], the problems of overcapacity were picked up again as a warning sign, signaling preparation of policy priority shift by the government. On 25 August 2009, the Ministry of Information and Industry held a news conference for “The Summer Report of the Operation of China’s Industrial Economy in 2009” (Ministry of Industry and Information Technology, Chinese Academy of Social Science, 2009). The ministry stressed that there had been severe overcapacity in sectors of shipbuilding, chemical, flat-glass, besides sectors of steel, cement and electrolytic aluminum. Moreover, redundant construction and rapid growth of investment projects in the emerging new sectors such as solar energy, wind energy etc also face potential risks of overcapacity.

On 26 August 2009, the State Council held an executive meeting to study the macroeconomic situation, stressing the necessity to look at the problems of overcapacity once again. It was pointed out that the process of industrial restructuring was slow in some sectors, and the problem of overcapacity and redundant construction is still worrisome. Traditional overcapacity sectors such as steel and cement were still expanding recklessly, and emerging sectors such as wind power and poly-crystalline silicon were also troubled by the tendency of redundant construction. It was emphasized that relevant government agencies should adhere the principle to control expansion of increment capacity and encourage optimization of the existing stock capacity, to deal with different sectors individually and selectively through supporting some of them and controlling

[23] On September 10th, Premier Wen Jiabao said China should “be alert to and protect all kind of risks including inflation” in his speech on the third Summer Davos Annual Meeting held in Dalian.

others, to cultivate newly burgeoning sectors and upgrade traditional ones, and to combine fully utilizing the basic adjustment mechanism from the market system with the conduct of MAC policy. The government committed to use various policy instruments such as legal, economic, technological, standard measures, and necessary administrative means comprehensively to deal with problems of overcapacity. Policy measures including industrial regulation, environmental-protection, land and financial regulations were requested to be employed in a better coordination manner so as to guiding the healthy development of industries[24].

On April 26th 2009, NDRC and other nine ministerial agencies of the government issued "Proposals On the Suppression of Overcapacity and Redundant Construction and the Guidance for the Healthy Development in Some Sectors". The new policy emphasized the problem of overcapacity and redundant construction in some sectors such as steel, cement, plate glass, coal chemical, poly-crystalline silicon, wind power, electrolytic aluminum, shipbuilding, soybean crushing etc. It was announced that the ministries will strictly enforce the rules of market access regulation and strengthen their investigation and management of projects in line with the principle to control blind expansion and redundant construction in some sectors (The State Council, 2009b).

6-2-3. Policies dealing with surging housing prices

As mentioned in the previous sections, the Chinese government took a lot of measures in controlling the overheated growth of real estate industry and the soaring housing price from 2005 to 2007. As a result of the tightening up policies implemented around second half 2007 and first half 2008, housing sector faced difficulties in terms of decline of both sales and prices. Housing sector is the sector benefited greatly and quickly from the stimulus policies introduced in the late 2008. In May 2009, the government further introduced policy measures in the No. 126 Document targeting at helping recovery of real estate sectors (General Office of the State Council, 2008a). As the macro-economy took the V-shape recovery in 2009, China's real estate industry successfully reversed the downward trend and picked up quickly. Fueled with excessive monetary expansion, housing prices rose rapidly with prices surges in the first half 2010.

In view of unexpected change in the real estate market, the government housing policies made a U-turn in the end 2009 and the early 2010. On December 14th, the executive meeting of the State Council put forward a new series of policies which were called "4 measures of the State Council"[25] aiming at increasing supply in real estate market, curbing speculation, strengthening supervision, and promoting the construction of low-income housing. On January 7th, the government issued "Notice on Promoting the Stable and Healthy Development of Real Estate Market" which was called "11 measures of the State Council". The purpose of this new document was to control excessive demand in the housing market through adjusting the credit policy on the second house purchase. The down-payment ratio of a second or more purchase must not be below 40% for those families that have successfully applied mortgage before (General Office of the State Council, 2010).

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[24] See Chinese government net, "Premier Wen Chaired an Executive Meeting of the State Council on Aug 26th", http://www.gov.cn/ldhd/2009-08/26/content_1402220.htm.

[25] See Xinhuanet, "Executive Meeting of the State Council Suggesting Curbing the Soaring of Housing Prices in Some Cities", http://news.xinhuanet.com/fortune/2009-12/14/content_12645791.htm.

On April 17th 2010, the State Council issued "Notice of the State Council on Resolutely Curbing the Soaring of Housing Prices in Some Cities" (The State Council, 2010). The policies were even tougher than before. According to the notice, the down-payment ratio must not be below 30% for flat which area is over 90m^2, and must not be below 50% for a second purchase with an interest rate being not less than 1.1 folds of the bench rate. The down-payment ratio for a third purchase or more purchases must be increased substantially. In cities witnessing rapid growth of housing prices and with a shortage of housing supply, commercial banks are allowed to suspend lending for a third purchase and more purchases on the basis of evaluating the risk situation. Mortgage applications may be declined for those wish to purchase flats or house in a city but failed in proving they are residents in the city through producing documents of tax-paying or social-insurance-paying as evidences. Local governments are allowed to take provisionally measures to introduce upper limit of housing purchase according to the local situation.

7. China MAC Policies: Summary and Concluding Remarks

The previous sectors outlined the evolution of China's macro-economic situation and MAC policies conducted over recent 10 years. Compared with typical matured market economy that relies mainly on monetary and fiscal policies to adjust the macro-economy, China's aggregate-demand instruments are apparently more diversified. The characteristics of diversifying MAC policy tools were reflected more clearly and strongly when the economy faced with overheated growth and inflation pressure and China's government had to stabilize the situation through implementing tightening up policies. Table 1 lists selected MAC measures observed in this paper.

Table 1. Selected MAC Measures adopted in China

	Name of instruments	Function mechanism	Government agency
1	Raising interest rate	Demand adjustment through money	PBoC
2	Raising Legal reserve ratio	Demand adjustment through money	PBoC
3	Issuing central bank bills in open market operation	Demand adjustment through money	PBoC
4	Issuing central bank bills targeting specific banks	Demand adjustment through money	PBoC
5	Reduce government debts	Reducing fiscal deficits	MoF
6	Reduce value-added tax rebates for exports	Demand adjustments through export	MoF
7	RMB appreciation	Demand adjustments through exp & imp.	PBoC
8	Raising bank capital ratio	Risk control & tightening credit	CBRC
9	Reducing subordinated debts in bank capital	Risk control & tightening credit	CBRC
10	Quota control on bank's credit	Tightening credit directly	PBoC\ CBRC
11	Window guidance on banks	Risk control & tightening credit	CBRC、PBOC
12	Raising down-payments in housing loans	Tightening housing demand	PBOC、CBRC
13	Differentiated interest charge for housing loans	Tightening housing demand	PBOC、CBRC
14	Restrict non-resident's buying flats in a city	Tightening housing demand	CBRC、city governments
15	Resuming and increasing IPO	Relaxing terms of direct financing	CSRC
16	Strengthening investment examining/approving	Reducing investment & excess capacity	NDRC、MoL、MoE
17	Prohibiting sectoral investment for 3 years	Reducing investment & excess capacity	NDRC、MoL、MoE
18	Raising own capital ratio for investment projects	Reducing investment & excess capacity	NDRC、CBRC
19	Subsidy provision for productive sow	Controlling pork price hike and inflation	MoF、MoA
20	Direct price regulation	Controlling inflation	NDRC
21	Strengthening environmental regulation	Environment reserve & investment control	NDRC、MoE
22	Tightening supply of land for construction	Rural land reserve & investment control	NDRC、MoL
23	Temporarily freezing construction land supply	Rural land reserve & investment control	NDRC、MoL
24	Handling major case with personal punishment	Signaling resolution of tightening up policy	NDRC etc

Sources: the table is compiled on the basis of observation of MAC policies from 2003-2010[26].

Although these policy instruments are diversified in terms of mechanism design, selection of targets and frequency of use, they all have some relationship with cyclical economic fluctuations with a view to adjusting the problems of aggregate demand in one way or another. More unconventional policy measures are employed in fighting against inflation. These measures can be roughly divided into three broad categories.

The first category is aggregate and parameter type tools. For example, OMOs by PBoC, the adjustments of RRR and interest rates obviously fall into this category. Fiscal policy tools such as adjusting government expenditure and deficits sometimes through changes in issuing treasury bonds are also part of aggregate and parameter type tools. Conduct of exchange rate is of this type since it affects foreign demand through adjustment of the balance of payments. To the extent the policy concerning capital ratio of banks affect credit expansion across most sectors in the economy, it is also of a parameter type policy tool, though the conventional goal of the bank's capital ratio regulation is to assure soundness of banking system rather than managing aggregate

[26] There are more modified types of MAC policy measure are designed in recent months since the paper was drafted by the May 2010. In controlling the problems of housing market volatility, the real estate developers were regulated by the government not to "delay in completing housing construction projects and selling the properties (wupan xishou)". Speculative investment on future market on agricultural goods will be punished. Relevant ministries expressed the zero tolerance on the media inaccurate reports on price increase and strengthen responsibility of provincial governors and majors of metropolitan cities on managing inflation. Relevant ministries reduce examination and approval of application to issue local bonds and strengthen supervision and regulation on debt burden of local financial and investment vehicles.

demand.

The second category is sectoral and quantitative tools that actually played important role in managing China's macro-economy in the recent decade. Concrete policy instruments fall into this category of MAC are quite wide spread. They range from restriction or even temporary prohibition on investment in specific sectors, raising the required capital ratio for investment in specific sectors to differential interest rates charged on mortgage, tightening up of regulation with regard to environment protection or provide urgent subsidy for production of certain agricultural products. Several industrial policies designed to deal with the problems of overcapacity in specific sectors serve to some extend MAC policy instruments since they are in part used to restrict investment so as to controlling the overheated economy and inflation. Quantitative regulations on land supply and credit control through the approach of "supporting some sectors while restricting others" are often used tools that may be covered by this kind of MAC instruments.

The third category is administrative intervention type tools such as temporary suspension of land supply for urban investment and construction projects, temporary price regulation on numerous daily commodities when inflation pressure is high, and dealing with legal cases with severe punishments on personals involved with clear signal of strengthening of MAC implementation etc. This kind of measures are usually only used in somewhat special circumstances in which other two-type tools have been tried but viewed ineffective and policy makers felt potentially urgent risks of macro-economic situation.

The rooting causes of diversification of MAC instruments and excessive dependency upon sectoral, quantitative and administrative tools in adjusting macro-economic performance are related to both traditional and current factors. As a transitional economy, China started her reform journey from the planning system in which the government direct controlled every aspects of the economic function. Though China has made a substantial progress in creating and nurturing the modern market system, the old mentality and tradition to seek solution on new problems through direct intervention and control by government are still influential, What is called "MAC" incorporates not only the "adjustment" on aggregate demand, but also the "control" of macro-economy perhaps with elements of mindsets inherited from the planned economy.

The second cause relates to the more recent open macro-economic environment in which passive and dynamic undervaluation of RMB imposes crucial constrains on flexible adjustment of monetary policy. In light of the Balassa-Samuelson effects, the domestic currency of a country in a rapid catch-up of productivity growth in tradable sector faces the pressure of real appreciation as a matter of trend. The pegged or heavily regulated exchange regime adopted in recent years caused the problems of "passive undervaluation of RMB exchange rate" that in turn imposes economic costs in employing interest rate tools in a flexible manner. When exchange rate and interest rate. the two major policy tools for adjusting an large open macro-economy are artificially constrained, the government has to use alternative policy instruments instead in dealing with macro-economic fluctuation.

There are surely both merits and shortcomings of diversified MAC policies. China's economic growth evolved in a very special setting with the country-specific challenges in terms of institutional and structural transformation, large size of the economy, and sharp contrast among different regions. Faced higher uncertainty in terms of relationship between certain policy tools and their desired impacts, diversified MAC measures represents a try-and-error approach that may help select the most effective and appropriate tools in all “the 18 weapons”.

Though the diversified MAC instruments for certain period of time in the past, they also revealed two kinds of fundamental problems. There are also clear evidences that the effectiveness of the policy sets are diminishing quickly, so the overhaul of the system is urgently needed. On the one hand, sectoral, quantitative, and administrative measures that were frequently used as the macro-economic tools inevitably incurred various economic costs that have detrimental effects on improvement of the market mechanism. For example, quantitative regulation of credit quota on banks is at odds with the basic objective to encourage competition and improve efficiency in banking sector. Direct restrict on sectoral investment for the sake of dealing with the problem of overcapacity beyond the criterion of environment and emission regulation inevitably intervene firm’s investment decision at micro-levels and caused controversies. Using land regulation as a macro-economic policy tools faces even more difficulties due to inconsistency between the necessary stable guidelines in land regulation and frequent adjustments determined by cyclical changes in macro-economic situation. It goes without saying that the blunt MAC measures such as direct price control, temporary freezing of land supply, and signaling policy determination through handling major case through unusual way are apparently with side-effects.

On the other hand, the parameter, aggregate and indirect instruments consistent with the basic principles of market economy may have not been fully utilized. Especially, the policy instruments of exchange rate and interest rate have been artificially restricted. In an open economy of rapid productivity catch-up, China’s exchange rate regime needs to be more flexible so as to playing more active role in adjusting the external imbalance. PBoC’s heavy interventions in foreign exchange market and huge surge in foreign exchange reserve indicate that RMB has been somewhat undervalued. China needs to rethink the balance between the desired benefits from the relatively stable exchange rate and desired function of a more flexible exchange rate in terms of adjusting macro-economic variables.

The adjustment of interest rate has been sluggish. For example, the range of monthly CPI change was 10.2 percentage points (from 8.5% to -1.7%) during the recent decade, but the range of the policy deposit interest rate change was only 2.16 percentage points (from 4.14% to 1.98%). The elasticity of interest change is just 0.21 against CPI change. During the same period, the range of CPI change in US is 6.33 percentage points, and the range of the policy interest rate change is 6.41 percentage points. So the elasticity in US is 1.01, almost 5 times as high as that in China.

The present macroeconomic situation and characteristics of policies also reveals the inflexibility of interest rate regime. The growth rate of GDP was 11.9% in the first quarter 2010, with critical shortage of supply of rural migrant workers in labor market. CPI and PPI rose to 2.8% and 6.8% in April, and real estate price hiked to a high level. Government introduced successive various tightening up measures controlling excessive demand in real estate sector such as raising RRR, strengthening credit regulation, and other unusual regulation on housing purchasing. The interest rate policy has been maintained in the low level introduced in the period when the strong stimulus package was implemented, and not been changed until October 2010. Sluggish response of interest rate to macroeconomic shocks may be interpreted as partial surrounding of interest rate policy as a result of defending undervalued exchange rate in China.

The basic goal of this paper attempts an observation of the stylized facts about diversified tools of China MAC policy in the recent decade, rather than providing a thorough analysis on the causes of the phenomenon and design of reform policies. The brief discussion of pros and cons of the observed characteristics of MAC is suggestive of future reform agenda in this area. In my personal opinion, three reform measures are needed to improve macro-economic management regime for China as a large and relatively opened economy. Firstly, China needs a more flexible exchange rate regime to better adjust her balance of payments. Secondly, China needs a deregulated interest rate regime to adjust aggregate demand. Last but not least, China should make policies of the central bank more neutral and maintain a stable money and macro environment for China's economic catch-up.

Reference

[1] China Banking Regulatory Commission, 2009a, "Notice of China Banking Regulatory Commission on the Current Adjustments to Some Credit Regulatory Policies to Promote the Steady Development of Economy" (No. 3 [2009] of China Banking Regulatory Commission), Jan 10th, 2009.

[2] China Banking Regulatory Commission, 2009b, "Circular on Improving the Capital Supplement Mechanism of Commercial Banks" (Exposure Draft), Aug 18th, 2009.

[3] China Securities Regulatory Commission, 2009, "Guiding Opinions on Further Reforming and Improving the Issuance System of New Shares", Jun 10th, 2009.

[4] GAO Peiyong, 2004, "From Proactive to Neutral: Fiscal Policy Underwent Difficult Choices", Economics of Finance and Trade, No.8, 2004.

[5] General Office of the State Council, 2004a, "Circular of the General Office of the State Council on Liquidating Fixed Assets Investment", Apr 27th, 2004.

[6] General Office of the State Council, 2004b, "Urgent Notice of the General Office of the State Council on Deepening Rectification in Land Market and Strengthening Land Management", Apr 29th, 2004.

[7] General Office of the State Council, 2004c, "Bulletin of Sanction on Jiangsu Tieben Limited Who Built Steel Project in Violation of Laws and Regulations", Apr 30th, 2004.

[8] General Office of the State Council, 2006, "Transmission by the General Office of Notice on Adjusting Housing Supply Structure and Stabilizing House Prices Issued by Ministry of Construction and Other Relevant Authorities ", May 24th, 2006.

[9] General Office of the State Council, 2007, "Notice of the General Office of the State Council on Strengthening and Standardizing Management on New Projects", Nov

17th, 2007.

[10] General Office of the State Council, 2008a, “Several Opinions of the General Office of the State Council on Providing Financial Support for Economic Development” (No.126 [2008]), Dec 8th, 2008.

[11] General Office of the State Council, 2008b, “Several Opinions of the General Office of the State Council on Promoting the Healthy Development of the Real Estate Market” (No.131 [2008] of the General Office of the State Council), Dec 20th, 2008.

[12] General Office of the State Council, 2010, “Circular of the General Office of the State Council on Promoting the Stable and Healthy Development of the Real Estate Market”, Jan 7th, 2010.

[13] JIA Kang, 2002, “Review and Evaluation of the Proactive Fiscal Policies since 1998”, Tianjin Finance and Tax, No.5, 2002.

[14] LI Daokui, 2008, “Double-Track Propulsion of RMB Internationalization”, China Finance, No10, 2008.

[15] LIU Shucheng, 2003, “Analysis on the New Fluctuation Mode of China Economy Development”, Economic Research, No.3, 2003.

[16] LIU Wei, CAI Zhizhou, “Economic Cycle and Macro-Control”, Journal of Peking University (Philosophy and Social Sciences), Vol.42, No.2, March 2005.

[17] LU Feng, 2006, “The Increase of China’s Labor Productivity and An International Comparison-The Long Run of RMB Real Exchange Rate (1)”, CCER Discussion Paper Series (In Chinese), No.C2006004, April 3rd, 2006.

[18] LU Feng, 2008a, “Is Inflation is really Imported for China as a Large Economy?”, International Economic Review (In Chinese), No.4, 2008.

[19] LU Feng, 2008b, “The ‘Mirror Image Relationship’ between China and US in external Imbalance: Understanding Chinese Economic Growth in Recent Years and the Present Adjustment”, International Economic Review (in Chinese), No.6, 2008.

[20] LU Feng, 2009a, “Does China Really Face the Problem of Overcapacity: Critical Review of China’s Campaign against Overcapacity (1999-2009)” China Economic Observer (No.19) (In Chinese), Sep 24th, 2009.

[21] LU Feng, 2009b, “V-Shaped Recovery---Observation and Assessment of the Chinese Macro-economy and Policies in the first half 2009”, CCER Discussion Paper Series (Chinese) No. C2009010, October, 13, 2009.

[22] LU Feng, LIU Liu, 2007, “Measurements of China’s Relative Labor Productivity Growth (1978-2005) -Rethinking the Relationship between the Balassa-Samuelson Effect and Renminbi Real Exchange Rate”, Chinese Economic Quarterly (in Chinese), Vol.6, No.2, Jan 2007.

[23] LU Feng and Li Yuanfang, 2009, “China’s Factor in Recent Global Commodity Price and Shipping Freight Volatilities” *China Economic Journal* Vol.1, Issue 3, December, 2009.

[24] LU Feng, SONG Guoqing, TANG Jie, ZHAO Hongyan, LIU Liu, 2007,

“Profitability of China’s industrial firms (1978-2006)” *China Economic Journal* Vol.1, Issue 1, pp. 1-31, February, 2008. .

[25] MA Kai, 2004, “Report on the Implementation of 2003 National Economic and Social Development Plan and a Draft of the 2004 Plan”, Mar 6th, 2004.

[26] Ministry of Construction, Ministry of Commerce, National Development and Reform Commission, 2006, “Opinions of the Ministry of Construction, the Ministry of Commerce, National Development and Reform Commission, the People's Bank of China, the State Administration for Industry of Commerce and the State Administration of Foreign Exchange on Regulating the Access to and Administration of Foreign Investment in the Real Estate Market”, Jul 11th, 2006.

[27] Ministry of Construction, Ministry of Land and Resources, Ministry of Finance, Auditing Administration, Ministry of Supervision, State Administration on Taxation, National Development and Reform Commission, and State Administration for Industry and Commerce, 2007, “Notice on the Work Plan of a Special Rectification of Market Order in Real estate Sector”, Mar 29th, 2007.

[28] Ministry of Finance, 1999a, “Notice of the Ministry of Finance” (No.3, 1999), July 13th, 1999.

[29] Ministry of Finance, 1999b, “Notice of the Ministry of Finance “(No.5, 1999), August 31th, 1998.

[30] Ministry of Finance, 2007, “Notice of the Ministry of Financing on the Release of ’Interim Measures of Management on the Insurance and Allowance for Producible Sows’”, July 18th, 2007.

[31] Ministry of Finance, State Administration of Taxation, 1999a, “Notice of the Ministry of Finance and the State Administration of Taxation on Raising Tax Refund Rates for Some Export Commodities”, Jan 29th, 1999.

[32] Ministry of Finance, State Administration of Taxation, 1999b, “Notice on Adjusting Several Tax Policies Concerning Real Estate Market”, July 29th, 1999.

[33] Ministry of Finance, State Administration of Taxation, 1999c, “Notice of the Ministry of Finance and the State Administration of Taxation on Further Raising Tax Refund Rates for Some Export Commodities”, Aug 2nd, 1999.

[34] Ministry of Finance, Ministry of Land and Resources, People’s Bank of China, 2007, “Notice of the Ministry of Finance, the Ministry of Land and Resources, and People’s Bank of China on the Adjustment of Policies Concerning Payments for the Use of New Construction Land”, Nov 7th, 2007.

[35] Ministry of Industry and Information Technology, Chinese Academy of Social Science, 2009, “Summer Report of Chinese Industrial Economic Operation in 2009”, Aug 26th, 2009.

[36] Ministry of Land and Resources, State Planning Commission, 1999, “Notice of the Ministry of Land and Resources and the State Planning Commission on Problems Concerning Issuing Additional Treasury Bonds to Finance Construction Land”, Sep 29th, 1999.

[37] National Development and Reform Commission, 2008, "The Measures of the National Development and Reform Commission for the Practice of Temporary Price-Intervention Measures on Some Important Commodities and Services" Jan 15th, 2008.

[38] National Development and Reform Commission, Ministry of Land and Resources, China Banking Regulatory Commission, 2006, "Proposals on the Heavy Regulation on Investment in Fixed Assets and Strict Control of New Projects", distributed by the General Office of the State Council on June 13th, 2006.

[39] National Development and Reform Commission, People's Bank of China, China Banking Regulatory Commission, 2004, "Notice on Further Strengthening the Coordination of Industrial and Credit Policies to Control Credit Risks", May 13th, 2004.

[40] People's Bank of China, 2003, "Notice of the People's Bank of China on further strengthening the Administration of Real Estate Credit", Jun 5th, 2003.

[41] People's Bank of China, China Banking Regulatory Commission, 2007, "Notice of the People's Bank of China and China Banking Regulatory Commission on Strengthening the Administration of Commercial Real Estate Credit Loans" (No. 359 [2007] of the People's Bank of China), Sep 27th, 2007.

[42] State Administration on Taxation, 2006, "Circular of the State Administration of Taxation on Collecting Individual Income Taxes on the Incomes Generated From Individuals' House Transfer", Jul 18th, 2006.

[43] Standing Committee of the National People's Congress, 1998, "Proposal of the Standing Committee of the National People's Congress on Ratifying Additional Treasury Bonds and Adjusting Central Budget", Aug 29th, 1998.

[44] Standing Committee of the National People's Congress, 2000, "Proposal of the Standing Committee of the National People's Congress on Ratifying Additional Treasury Bonds Financing Infrastructure and Adjusting Central Budget of This Year", Aug 25th, 2000.

[45] Standing Committee of the National People's Congress, 2003, "Banking Supervision Law of the People's Republic of China", Released on Dec 27th, 2003.

[46] State Economic and Trade Commission, 1998, "Catalog of Sectors in Which Redundant Construction is Prohibited", Aug 9th, 1999.

[47] The State Council, 1998a, "Proposal of the State Council on Submitting the Issue of Additional Treasury Bonds by the Ministry of Finance Financing Infrastructure and the Adjustment Plan (Draft) of Central Budget", Aug 20th, 1998.

[48] The State Council, 1998b, "Notification on Further Deepening the Reform In Urban Housing Regime and Speeding up Housing Construction", Jul 3rd, 1998.

[49] The State Council, 2004, "Decision of the State Council on Deepening Reform and Strengthening Land Management", Oct 21st, 2004.

[50] The State Council, 2005a, "Decision of the State Council on Promulgating the 'Interim Provisions on Promoting Industrial Structure Adjustment' for

Implementation”, Dec 2nd, 2005.

[51] The State Council, 2005b, “Circular of the General Office of the State Council on Effectively Stabilizing House Prices”, March 26th, 2005.

[52] The State Council, 2005c, “The New ‘Eight Measures’”, from Guotai Junan, http://www.gtja.com/share/NewsContent.jsp?docId=252525 .

[53] The State Council, 2006a, “Circular of the State Council on Promoting Structural Adjustment in Overcapacity Sectors”, Mar 12th, 2006.

[54] The State Council, 2006b, “Circular of the General Office of the State Council on Adjusting the Structure of Housing Supply and Stabilizing Housing Prices”, May 24th, 2006.

[55] The State Council, 2006c, “Notice on Relevant Questions about Strengthening Land Adjustment and Control”, Aug 31st, 2006.

[56] The State Council, 2007, “Opinions of the State Council on Promoting the Production and Development of Live Pigs and Stabilizing the Market Supply” (No. 22 [2007] of the State Council), Jul 30th, 2007.

[57] The State Council, 2009a, “Circular of the State Council on Adjusting Capital Ratio of Fixed Assets Investment Projects”, approved on May 25th, 2009, and released on May 27th, 2009.

[58] The State Council, 2009b, “Proposals on the Suppression of Overcapacity and Redundant Construction and the Guidance for the Healthy Development in Some Sectors”, Sep 26th, 2009.

[59] The State Council, 2010, “Notice of the State Council on Resolutely Curbing the Soaring of Housing Prices in Some Cities” (No. 10 [2010] of the State Council), Apr 17th, 2010.

[60] Wen Jiabao, 2004, “Government Work Report for Dual Conferences”, Mar 5th, 2004.

[61] Wen Jiabao, 2005, “Government Work Report for Dual Conferences”, Mar 5th, 2005.

[62] Wen Jiabao, 2010, “Government Working Report for Dual Conferences”, Mar 7th, 2010.

[63] XU Jingyong, 2003, “A Review and Reflection on the Macro-economic Control Policy in China”, Journal of Finance and Economics, Vol. 29, No.2, Feb 2003.

[64] YU Yongding, 2008, “Us treasuries and panda bonds”, China business news, Dec 12th, 2008.

[65] Zhu Rongji, 2003, “Government Work Report for Dual Conferences”, Mar 5th, 2003.