PRELIMINARY
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CHINA'S ROLE IN THE CURRENT GLOBAL ECONOMIC ADJUSTMENT PROCESS

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Abstract

This paper argues that the controversies surrounding the exchange rate of the renmibi can be resolved using structural measures such as phasing out the value-added export tax rebate and making China's FDI regime consistent with its WTO commitment. In addition, the paper finds that the spurious linkage between China's economic overheating and its undervalued currency can not be supported by empirical evidence. Instead, the paper purports that the banking sector incentive to expand the balance sheet, interest rate liberalization, and local government over-investment contribute to rapid expansion of bank credit and overinvestment. The existing pegged exchange rate regime still works well for China at this stage of economic development. However, as China's capital account becomes more porous, the existing RMB exchange rate regime will become unsustainable. China thus needs to have a set of domestic nominal anchors supported by credible institutions. Thus, some institution building is required and careful sequencing is needed. Even without changing the exchange rate level and regime at this stage, China can still play a role in helping mitigating the current global economic imbalances because of its vast infrastructure needs derived from its on-going structural reforms.

Key words: Reminbi, Exchange rate regime and policy, Global imbalances

I. China's Currency Controversies: From a deflationary force to an inflationary one in the world economy

Calls for the *renminbi* (RMB)—the Chinese currency—to revalue, first advocated by former senior officials of the Japanese Ministry of Finance in December 2002,[1] have since become a contentious international policy issue. The Kuroda-Kawai (2002) argument for RMB's revaluation was based on that China was spreading deflation "through export growth and a combination of domestic price deflation and an exchange rate pegged to the dollar." They then proposed that China should either reflate its economy through monetary expansion or allow the currency to appreciate. Their basis of argument, however, can not be corroborated by trade statistics (Table 1 and Table 2) because of China's rather small share in the world's manufacturing trade as well as in the overall world trade. Furthermore, given that the production and distribution networks are in the hand of the multinational corporations, the pricing power of Chinese exports in the world market is rather limited[2]. After all, the monetary authorities in the industrialized economies, because of their economic influence, have more control over deflation as well as inflation of the world economy.

Never mind of the soundness of the reasoning, the calls for the renminbi to revalue, have found a life of their own in the United States, though from a different vein. Because China is running a large trade surplus with the US and the US has suffered from a large loss of manufacturing jobs (2.7 million by various reports) since President Bush took office, the election year politics has forced the Administration to act.

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[1] See "Time for a Switch to Global Reflation" by Kuroda and Kawai, *Financial Times*, page 23, December 2, 2002.

[2] For example, Wal Mart Stores, Inc., in the US purchases about one eighth of total US imports from China. It has more than 80 percent of the 6000 factories in Wal-Mart's worldwide database of suppliers in China. Thus competition for Wal-Mart contracts in China is fierce, pushing down supplier's price and wage rate in China. See "Chinese Workers Pay for Wal-Mart's Low Price," *Washington Post*, February 8, 2004 and a related article, "Is Wal-Mart Too Powerful," *Business Week*, October 6, 2003.

China is naturally an easy target. On the trade front, the US has put restrictive quotas on three fast growing categories of textile and garments and an anti-dumping duty up to 78 percent was levied on Chinese made TV sets. On the financial front, Treasury Secretary John Snow, Federal Reserve Chairman Allen Greenspan[3] and Commerce Secretary Don Evans, in various occasions, have all demanded Beijing to revalue its currency. US official concerns have also gained intellectual backing[4] from an influential Washington DC based think-tank, the Institute for International Economics (IIE). Goldstein and Lardy (2003a and 2003b) and Williamson (2003) of IIE calculated that the renminbi was undervalued by 15-25 percent and therefore a large revaluation is warranted. They also suggested that the current pegged exchange rate regime in China is outmoded and China should move to a more flexible exchange rate regime.[5] However, in the second half of 2003, China's economic growth started to pick up. Its torrid growth mainly spurred by rapid bank credit expansion has also been attributed to the recent hikes of world commodity prices, notably some key industrial raw materials such as iron ore, copper, aluminum, oil, cotton, and soybean. Indeed, the news came out from the State Council of China to reign in the overheating economy sent the stock market prices in some key commodity heavy economies into tumbles. China has since become an inflationary force in the world economy. Not surprisingly, the undervalued currency is also regarded as a cause of the overheating economy because the undervaluation of the currency gives rise to the expectation of a near-term revaluation of the renminbi, which then draws in large capital inflows and causes the monetary base to expand and lead to excessive credit growth.

[3] Greenspan raised the issue from the view that large inflow of capital will make the current RMB-dollar fixed rate unsustainable. Therefore RMB would have to be revalued to reflect the market pressure.
[4] Fred Bergsten claimed that the IIE was the first to raise the RMB issue. So the causation should be reversed.
[5] *Asian Wall Street Journal*, September 12, 2003.

China's run-away economy thus created excessive demand for commodities and caused a rapid rise of the world commodity prices. China is now also blamed for exporting inflationary pressures to the world economy. The pendulum has swung to the opposition direction: The perceived undervaluation of the renminbi is implicated as both a deflationary force and an inflationary one in the world economy.

One of the reasons why the valuation issue of the renminbi is polemic is that it is difficult to see how currency markets would react to the current level of the renmibi exchange rate because there is no deliverable forward exchange rate market as China's capital account is closed and renminbi is not convertible. Fortunately, a small piece of evidence one could still draw is to look at the non-deliverable forward (NDF) RMB-US dollar rate (Figure 1). If the NDF could act as a guide to the market sentiment, the renminbi was in fact until November of 2002 viewed by the market as overvalued. This was especially true during the 1997-98 Asian financial crises because in which period the NDF RMB value was on average at least 6 percent above its pegged rate with the US dollar. Since November of 2002, the RMB NDF has only shown a slight undervaluation and on average it is by less than 2.5 percent from its par. Therefore, the NDF market does not seem to indicate that the RMB is way off its current fixed rate with the US dollars[6]. To be sure, because of China's inherent structural weakness reflected by its large magnitude of non-performing loans in the banking sector (30-40 percent of GDP) and a bleak outlook of its fiscal sustainability (gross debt to GDP ratio over 100 percent of GDP), the economic fundamentals in the medium run by no means warrant a significant RMB revaluation as suggested by the IIE economists. This expectation is partially confirmed by the RMB NDF rate. Indeed, China's

[6] One of course can argue that the NDF market is quite small and could not indicate the overall market sentiment. However, the same argument can be applied to other calculations of fundamental equilibrium exchange rate value. In fact, the world economic model used by the IMF does not indicate a large undervaluation of the RMB, either (IMF, 2003).

large foreign exchange reserves are in fact a sign of weakness rather than that of strength. After all, strong currencies are backed by their credible and strong institutions and not by their large reserves.

The insistency for a renminbi revaluation is essentially motivated by the view that China need to take a big step to address its large trade surplus with the US, which stands at about $125 billion or about 10 percent of China's GDP in 2003. But because of some underlying structural problems such as the triangular trade among China, its East Asian neighbors, and the US as well as large US savings-investment imbalances, a *nominal* RMB revaluation does not necessarily lead to a balanced trade between the two economies, let along bringing to an end of large job losses in the US manufacturing sector the Bush Administration seeks to address[7]. Indeed, the large US trade deficit with the rest of the world is fundamentally determined by its own large imbalance of savings and investment. An appreciated renminbi may only change the geographic distribution of the US trade deficit, but can not eliminate it. However, the unintended consequence of the RMB appreciation would be to fulfill the current market expectation of an RMB appreciation, which in turn would attract more speculative, short-term capital inflows into China and induce further expectation of RMB appreciation, thus setting off a major financial bubble in China leading up to the 2008 Beijing Olympics. Another potentially adverse effect for a quick appreciation of RMB is that it will have unnecessary impact on the smooth adjustment of the US dollar. Should China starts a rewind of its holdings of US treasuries and if other Asian central banks follow suit, US short-term rate markets would be seriously upset, thus disrupting the Fed's monetary policy operations and bringing more uncertainty to the world economy.

[7] The reason is simple: China's competitive advantage is in the area of labor intensive manufactures where the US has long ago exited.

The Chinese government, despite persistent pressures for it to revalue, has so far resisted the calls for an RMB revaluation. Instead, it put scores of emphasis on the stability of the renminbi. Nevertheless, these pressures for a nominal RMB revaluation have already forced the Chinese government to react. It has set forth various initiatives to placate the calls for renminbi's revaluation by reducing value-added export tax rebates by 3 percent at the beginning of 2004, drawing a large shopping list to attempt to silence the anti-China trade cacophonies in the US, and relaxing capital outflows via an unprecedented, rapid, and to some extent ill-sequenced capital account liberalization. More recently, in order to contain economic overheating, the government has raised lending criteria and enforced administrative orders to cut back lending to steel, construction, property, automobile and other related sectors. So far these policies seem to be working as inflation rate has moderated and bank loans to those overheated sectors started to decline. A soft-landing can still be expected. However, the ill-conceived capital account liberalization steps have also exacerbated the inconsistency between the existing exchange rate regime and independent monetary policy objectives. This policy contradiction may potentially lead to a currency crisis if it is allowed to deteriorate further, putting China on path to repeat what the crisis East Asian economies erred before the 1997-98 East Asian financial crises.

This paper takes a structural and development approach to China's exchange rate issue by emphasizing that the current exchange rate regime still works well for China at least for the next few years before some credible domestic nominal anchors are in place to substitute the existing one that uses the exchange rate as a nominal anchor. However, for the pegged exchange rate to work, China should *strengthen*, rather than, relax its capital controls by discouraging hot money from flowing into the country. In the meantime, careful sequencing strategies are

needed to build core institutions that can facilitate the eventual move to a more flexible exchange regime. These institutions include central bank independence, inflation targeting, risk management facilities, and capital market development. In addition, China needs to aggressively address the NPL problem in the state-own banking system via rapid ownership diversification and completely revamp the state-owned enterprises, and set a time line for the economy eventual convergence to a full market economy. Before moving to a flexible exchange rate regime, building credible institutions is the highest priority at this stage of its economic development.

Indeed, if domestic institution credibility is not there, China would be better served by using the exchange rate as a nominal anchor. The exchange rate regime issue is thus inconsequential at this time as long as China has an objective of having monetary policy autonomy and a stable exchange rate while strengthening its capital control. As China's economy comes into age, it would ultimately move to a flexible exchange rate regime. Thus, building credible institutions for the transition should be the central focus. However, the window of opportunity to build such institutions may be much shortened and the monetary policy autonomy will be lost as China's capital controls turn porous. The outcome of being forced to quickly move to a flexible exchange rate regime will be by all means less palatable.

The paper proceeds as follows: Section II argues that a nominal revaluation of renminbi will not restore the Sino-US trade balances if this is the main argument or concern of China's currency undervaluation. Section III discusses the causes of its current macroeconomic overheating and argues that a revaluation has no direct consequence to cool down the overheating economy because rapid credit extension is fundamentally determined by incentive system of the banking system, interest rate liberalization, and the bureaucratic behavior of local governments. Finally,

the section also makes an assessment on whether the inflation will accelerate and the economy will have a soft-landing. Section IV looks at China's exchange rate regime at this stage of economic development by linking its development strategy to its exchange rate regime determination. It argues that as long as there is no fundamental inconsistency between the fixed exchange regime and monetary policy objectives, the current fixed exchange rate regime is still sound. However, if China's capital controls were to become more porous, it should think about moving to a more flexible exchange rate regime, preferably a managed floating plus as proposed by Goldstein (2002). The timing of the exit is important as well. Section V proposes a new development paradigm for China and these development issues are consistent with China's positive role in the current global economic imbalances. Section VI concludes.

II. Nominal Revaluation of RMB Will Not Restore the Sino-US Trade Balances

Four underlying factors: Why is it that by simply manipulating the nominal exchange rate, the US is not going to resolve the structural trade deficit with China? Other than the US savings and investment imbalances, from the Chinese perspective, four underlying factors that determine the existing Sino-US trade imbalances would also help understand the argument. The first is related to China's trade structure. At present, more than 50 percent of the Chinese exports are conducted in the form of processed trade: China imports intermediate components, mainly from Japan, South Korea, and Taiwan, and then assembles them for exports. The final products after assembly are then disproportionately exported to the US market. This pattern of trade has allowed China's powerful exporting neighbors, South Korea, Taiwan, and to some extent, Japan, to

divert their previously US-bound exports to China, thereby reducing their trade surplus with the US. If this triangular feature of the China-US trade were to be taken into consideration, the adjusted real trade balance between China and the US would be far smaller than the current number since China's value-added in the processed trade has been rather minimal, mostly in the form of low wages of the assembly workers. Indeed, this feature is evidenced by the fact that although China has a large trade surplus with the US, it runs a similarly large size of trade deficit with South Korea, Taiwan and Japan (Figure 2). Therefore, China's global trade surplus is small, accounting to only 2 percent of its GDP per year.[8] As the US-China trade deficit ballooned, it will not be surprising that China has become an obvious target. An appreciation of RMB may appear to make the Chinese exports more expensive; but it would also make its intermediate imports cheaper. As long as exporters could internalize this exchange rate effect, the net export prices due to a nominal RMB appreciation from the processed trade sector may not be affected much. However, an appreciated RMB will disproportionately hit the exporters in the non-processed trade sector which is primarily dominated by Chinese domestic firms, further exacerbating the painful restructuring and the wage depression process. Indeed, China's ordinary trade, the trade sector originated by domestic firms, has been consistently registering a deficit (Table 3). Various studies have shown that the value-added components in China's high-technology exports are limited (China Economic Quarterly, 2004). A revaluation of RMB would adversely impact this sector as well. Finally, as China is implementing its trade liberalization commitments made upon its accession to the WTO in the areas of both tariffs and non-tariff barriers (Table 4), it is likely that it will experience increased current account deficit as experienced by most of the developing countries.

[8] Calculated by author using data from 2002 International Financial Statistics (IFS).

Indeed, it appears that China is moving towards this direction as it has already shown a large 7.8 billion trade deficit in the first quarter of 2004.

The second factor has to do with China's value added export-rebate tax implemented in 1998. By addressing export subsidy issue first, China still has ample room to maneuver before considering the exchange rate appreciation. In the midst of the 1997-98 Asian financial crises, former Chinese Premier Zhu Rongji, while pledging not to devalue the RMB, also sought to placate the Chinese exporters by offering them a 17 percent value-added export tax rebate. This policy, still in effect today, has certainly contributed to an imbedded real depreciation of RMB. The export tax rebates, which have contributed to maintain China's export growth over the turbulent period of the Asian financial crisis, are no longer needed at a time when China's export growth is robust and its FDI inflows have reached to a record number, even surpassing the United States for the first time in history. To be sure, China's rapid export growth since the 1998 has made the export rebate tax too expensive to maintain. The export rebate tax, currently stands at $24 billion or a quarter of China's trade surplus with the US, also runs the risk of impairing the credibility of the government as the Ministry of Finance would have to backlog the payments to exporters for at least a couple of years. Not only is the export rebate tax too expensive, it has also led to distorted incentives and increased corruption as some exporters round-trip their products in order to qualify for rebated taxes. From the income distribution point of view, the export rebate tax has a biased impact: tax payers in other sectors of the economy are subsidizing the exporting sector, which by far is the most profitable and fastest-growing sector of the Chinese economy. Furthermore, such a value-added export tax rebate is also a version of export subsidy. As the trade theory indicates, export subsidies are detrimental to a country terms of trade (TOT). Indeed, recent calculation has indicated that China's TOT has deteriorated

markedly (Table 5) with respect to all of its trading partners. Its TOT deterioration against OECD economies is even more pronounced. China's experience of its TOT development is very different from that of the Japanese and Korean ones: Both countries have had steady gains of TOT until their recent economic malaises.

China's large reserves of semi-skilled labor force in the rural sector is exerting downward pressures on the Chinese wage rates in the export sector and therefore one could never ignore the wage rate issue in the calculus of China's trade competitiveness. This is the third factor, and perhaps the most important factor for some time to come, that is affecting RMB's real valuation. China's export structure in terms of technology content has improved markedly over the years. However, it is puzzling that the wage rates in the labor intensive exporting sector have not changed much over the last ten years, roughly staying at around $100 a month (Cheung and Xiao, 2003). This rather stagnant wage pattern can be linked directly to the on-going restructuring in the state owned enterprise sector and the fact that China has an unlimited supply of labor from its vast rural area. Because of these two factors, the wages in the export sector have not led to an overall domestic wage growth, usually observed in a country with large inflows of FDI where higher relative wages in the export sector will tend to pull up the overall wage rate of the economy (Feenstra, 2001). The Chinese case shows that the export sector wage rate for assembly workers appears to have had only a downward flexibility and an upward rigidity. To some extent, this upward wage rigidity is also caused by the collusion between the local government and the FDI-funded firms. It commonly observed that in order to attract FDI to locate in their domiciles, local governments are often willing to accommodate the interests of foreign-funded firms at the expenses of the workers by not strictly enforcing labor rules and standards that are essential and have been proven to be effective in bringing about a

downward rigidity of wages. That said, the labor standards are in general even worse in some privately-owned small and medium manufacturing firms.

The fourth factor is related to China's FDI investment regime. Although China is the largest recipient of FDI in the world, close to 60 percent of its inflows are still from Taiwan and Hong Kong, as well as its own round tripped capital via Hong Kong and more recently and increasingly, from offshore banking centers such as the British Virgin Islands and Bermuda. These firms are mainly small and medium sized ones with a short investment horizon and low technology content. Their main motives are to take advantage of China's cheap labor, generous fiscal incentives offered by both central and local governments, and securer property rights protection not usually offered to domestic investors. To attract FDI and create jobs, local governments are often eager to offer more fiscal incentives than what already granted by the central government. The income tax of foreign funded firms is a case in point. At present, the income tax rate is only 15 percent for foreign-funded and joint venture firms in economic zones, less than half of the 33 percent levied on domestic firms. In addition, foreign invested enterprises are privileged to have an income tax exemption in the first 2 years after making profits and an income tax reduction by half in the following 3 years. For so called FDI funded hi-technology firms, income tax reduction by half will be extended for 6 years. These tax incentives are further sweetened by concessions that stipulate favorite treatment of land, raw materials, energy, and labor usage. Fiscal subsidies have made the real costs of capital of FDI-funded firms, especially of those firms in the processed trade sector, considerably below the world market price.

That said, as long as these four underlying structural factors of China's export competitiveness are still in place, a simple revaluation of RMB, in spite of its expediency, will not be able to adequately address the concerns

of the policy makers in the US: trade competitiveness and halting job losses in the manufacturing sector. Even if China were to appreciate its currency by 15 to 25 percent in nominal terms as suggested by Morris Goldstein and Nicolas Lardy of the Institute for International Economics, the nominal appreciation could easily be offset by downward wage changes, additional fiscal incentives, cheaper intermediate imports, and value-added export rebate taxes.

Apparently, Chinese policy makers are fully aware of these structural factors behind of China's real export competitiveness. Because of the RMB appreciation pressure, on the trade side, they have reduced the value-added tax rebate rate to 14 percent from a previous 17 percent.[9] To lessen market pressures, they are in the process of relaxing foreign exchange controls imposed on Chinese firms and citizens to bring foreign exchange overseas so as to alleviate the pressures of RMB appreciation because of hot money inflows.[10]

Obviously, to reduce the value-added tax rebate is a policy in the right direction. However, the ad-hoc and piecemeal approach to capital account liberalization could potentially lead China to repeat what the crisis-countries in Asia erred before the 1997-98 crisis by bring about fundamental policy inconsistencies between the fixed exchange rate and increased free flow of capital, thus casting aside the valuable lessons learned. Given China's existing institution quality and limited capacity to monitoring capital flows, the government will find it difficult to control outflows once the market sentiment on China sours. Indeed, the NDF RMB market clearly indicates the large volatility of the RMB BDF over the short period of time (Figure 1). The experiences from countries that have successfully liberalized the capital account indicate that there must be an overall policy framework to sequence the capital account opening

[9] China just announced on October 15 there will be a three percentage reduction of the export rebate tax starting on January 1 2004.
[10] See Box 1.

through speedy building up of core institutions that are related to capital account transactions such as clearer property rights, efficient legal system, prudential oversight, healthy banking system, enhanced transparency and disclosure rules, and foreign participation in the domestic financial sector. By various measures, China still trails far behind in each of these areas mentioned. It is only wise for China to take a cautious and risk-based approach toward its capital account liberalization. Notwithstanding, it does not mean that China should not proceed with its financial liberalization. Its liberalization policy has to be sequenced carefully with its domestic sector liberalized first before contemplating the capital account liberalization and its exchange rate regime (Chan-Lee, Liu, and Yoshitomi, 2002).

The current dollar pegged system has served China well as its domestic capital market is still shallow and its international transactions are all denominated in dollars. Under the circumstances of China's institutional capacity, the existing exchange rate regime in fact relies on the exchange rate peg as a nominal anchor for policy credibility. It is also a system that is relatively easy to manage, compatible to the existing market development and technical capacities.

Dealing with the Sino-US Trade Imbalances: Then what should be China's appropriate responses to RMB's revaluation pressured by both the U.S. and the ensued market expectation? In fact, if properly framed, the RMB valuation policy could have a natural connection with China's continued structural reform in trade and gradual institutional convergence as committed by its WTO obligations.

In response to the US pressures, China could simply draw up a shopping list with a large sum (say $20 billion or 20 percent of Chinese trade surplus with the US) and use it to selectively target sectors and electoral districts that raised the strongest objections to the Sino-US trade

so as to deflect the threat of trade sanctions and reduce the dissonance of trade politics that is typical in a US presidential election year.

In the near term, to deflect immediate pressures to revalue its currency, China should consider phasing out or even revoking the 17 percent value-added export rebate taxes implemented in 1998. By phasing out the export rebate tax, China would effectively allow RMB's real appreciation against the US dollar, thus mitigating protectionist pressure from the US. This policy initiative will show that China is a responsible partner in the global economic adjustment process. In fact, the most significant part of this policy is that it suits China's own interests well as the export rebate tax program has become outdated and too expensive to maintain.

Moreover, the Chinese government could use this opportunity to take steps to streamline its FDI regimes and make them consistent with China's WTO commitment. In spite of China's large inflows of FDI, China is in fact an underachiever to attract FDI from large multinational companies of the OECD economies (Wei, 2000). There are reasons why multinational firms are still reluctant to relocate to China. For Instance, a recent survey conducted by the Japan Bank for International Cooperation (JBIC)[11] shows, despite the fact that China has become a favorite place for Japanese investors, its FDI policies and regulations still lack maturity, transparency, and predictability. The survey scores on China in those areas have been the worst among countries that Japanese firms have had investment. Even with extensive incentives in place, the current FDI related tax system remains opaque and is subject to frequent changes. A similar country case study done by the McKinsey Global Institute (2003) also corroborates the JBIC survey findings. The current FDI regime, despite its quantity success, needs to be improved further through greater transparency and predictability to reach a quality success by attracting

[11] The Annual Survey on Japanese Investment Overseas, Japan Bank for International Cooperation, 2002.

large scale of investments from transnational companies, for they tend to offer high technology contents that will create large demand for high-skilled labor with higher wages, thus elevating the relative wage rate between the FDI sector and the domestic sector so that the overall wage rate in the economy can increase. Such an effect will certainly generate large domestic demand.

In fact, making China's fiscal incentives consistent with best practices of international norms also serves to discourage speculative capital flows concealed in the form of FDI, which in turn will help reduce pressures on RMB.

These trade liberalization measures will also help secure China as a market economy status in the US anti-dumping cases. Without this status, it will be extremely difficult, if not impossible, for Chinese firms to win any anti-dumping cases in the US courts.[12]

III. Linking China's Exchange Rate with its Current Macroeconomic Overheating: Would a Revaluation Help Cool the Economy?

Economic Overheating and Torrid Pace of Investment: By various indicators, the Chinese economy appears to have entered into another cycle of rapid growth spearheaded by rapid fixed assets investment in 5 sectors: real estate development, steel, electricity generation, urban construction, and the chemical sector. These five sectors accounted for 59 percent of total fixed investment in 2003. Fixed assets investment as a share of GDP reached to 43 percent, one of the highest levels in history (Table 6). It is estimated that the projects under construction in 2003 amounted to the combined values of the last three years. While investment in the primary sector declined by 25.1 percent, investments in secondary and tertiary sectors jumped by 78.6 percent and 41 percent,

[12] China has always been an easy target of US anti-dumping cases. It has occupied 15 percent of US anti-dumping cases since 1981.

respectively. In particular, investment in steel, aluminum, cement, and automobile leaped by 96.6%, 92.9%, 121.9%, and 70%, respectively. In the first two month in 2004, investment in 16 out of 30 major industries in the manufacturing sector doubled. For example, investment in the steel industry and the construction material sector increased by 172.6% and 137.4%, respectively. With regards to steel, China already produced 200 million tons of steel in 2003, which has exceeded the total steel outputs of Japan and the US combined. Given the current pace of investment, it is forecasted that China's auto output will double in three years. Such a torrid pace of investment has caused a rapid rise of the prices of raw industrial materials. China is now facing a sever energy and electricity shortage this year with frequent blackouts in the coastal region. One sign that the economy is red hot is that the electricity consumption almost doubled in 2003 over the previous ten years (Figure 3). Although China's GDP is only one fifth of Japan's, its electricity consumption has already outpaced Japan's and China's oil imports have also surpassed Japan as the second largest oil importer in the world. This broad-brushed comparison between China and Japan in energy consumption may be misleading, but it may indicate that China's industries could suffer from the lack of scale of economies and are energy inefficient.

Relationship between overheating and undervalued currency: As the Chinese economy is a bank-based economy (Table 7), those fixed asset investments are primarily funded by the banking sector. Indeed, the growth rate of M2 has returned to its historical high after several years of deceleration (Table 8). Some have attributed the overheating in China to an undervalued currency (Eichengreen, 2004 and Lardy, 2004). The rationale behind it is that China's undervalued currency raises the expectation of a revaluation in the future, which then draws large capital inflows into the country and therefore expands the monetary base. In order to sterilize the impact of capital inflows, the monetary authority has

to engage in open market operations to buy foreign assets and sell domestic assets. The monetary authority is thus facing a dilemma: It can not raise the interest rate to cool the red hot investment for the fear that it would attract further capital inflows, which will in turn cause the monetary base to expand further. Thus, the only way out is to revalue the currency.

However, this textbook explanation of the causes of China's current economic overheating needs some reality check. First, China is not facing a fundamental policy inconsistency between its exchange rate stability and its autonomous monetary policy as long as it still has capital control in place. In spite of some recent steps that may have made capital outflows more porous, China still has most categories of its capital account under strict control. Should it wish, China can tighten its capital controls by discouraging speculative capital inflow[13]. To be sure, speculative capital inflows may have difficulties in finding their way out of country because of capital controls once sentiments on China turn negative. Therefore, there is no reason that China can not raise its interest rates at this time to discourage over investment. The issue really lies at whether the interest rate instrument is *effective* enough under the current macroeconomic context. Second, a statistical test does not seem to support the causal relationship between China's accumulations of foreign exchange reserves and its M2 growth. A Granger causality test, which uses the monthly data of China's foreign exchange reserves and M2 from 2000 to the first quarter of 2004, indicates that the reserves do not Granger cause M2, although the M2 Granger causes the reserve accumulations (Table 9).

There are, however, three alternative factors that can perhaps better explain the causes of this cycle of China's economic overheating. The first

[13] Indeed, as argued above, making the FDI regime consistent with China's WTO obligation by reducing the existing pervasive fiscal incentives serves as a deterrence to keep some speculative flows imbedded in the form of FDI out of the country.

factor has to do with the competition among the big four state-owned commercial banks (SOCBs) to get listed in stock market. The second one is related to the on-going interest rate liberalization. The third one is connected to the local government overinvestment because of the lack of domestic market integration.

Competition to get listed first: China's big four SOCBs are plagued by a mountain of bad loans, inadequate capital and loan loss provisions, poor risk-management skills, inefficient or non-existent corporate governance, over-staffed labor forces and over-extended branches, and constant government interferences. As China is opening its banking sector for foreign competition, the Big Four's current financial state poses as a serious risk to the economy. Obviously, China's new leadership has recognized the serious nature of the problem and they have put banking sector reform as one of the highest priorities. The present strategy to banking sector reform has some resemblance of what the government has done to the state-owned enterprises: improve corporate governance through gradual ownership divesture. It is believed that once the banks are listed in overseas stock markets, the SOCBs will be subject to international accounting standards and the international norms of corporate governance. The management of these SOCBs will thus improve, so does their profitability. As banks are quite different from industrial firms, they have to maintain minimum 8 percent capital in order to be able to operate, let alone getting listed. By all means, none of the Big Four SOCBs at this juncture can satisfy the minimum requirement to get listed in overseas because of their negative net worth. Despite recent aggressive measures to deal with NPL problems[14], including using $45 billion of China foreign exchange reserves to write off NPLs, only two SOCBs, the Bank of China and the Construction Bank of China, are currently close to reach a minimum of 8 percent of equity of the BIS standard. The current

[14] See Liu (2003) for a detailed account of these measures.

policy for listing is that as long as NPLs can be controlled under ten percent and capital adequacy ratio is above the minimum 8 percent, any SOCBs can get approved for listing in overseas stock markets. Apparently, getting listed first will show that the bank managers are doing a good job and such recognition appears to be important for their future careers. Thus, great incentives have been created to reduce NPLs at least on book in order to get listed first[15]. The question is how to do it. Based on their existing profitability and no-further external assistance to write off bad loans, Chan-Lee, Liu and Yoshitomi (2002) estimated that it would take the SOCBs 10 to 15 years to grow out of their NPL problems under the assumption that the SOCBs will have no new bad loans accrued.

However, there appears to be an easy way out of the problem at least in the short run and this has been supported by many inside China. This view purports that China's NPL problem is not as serious as what the observers in the West feared. As NPLs are measured as a share of total loans, from the accounting point of view, as long as the denominator, the total loans, can grow fast enough each year, the NPL ratio will tend to shrink yearly. This view is based on one implicit assumption, that is, there are no new NPLs or smaller amount of NPLs accruing in the future. It also means that for banks to be able to fulfill such a goal, the banks' behavior would have to change. That is, they must possess better corporate governance and risk management skills so that new NPLs will have to be maintained at a minimum level. To use a numerical example to illustrate this argument, suppose the current NPL is 28 percent of the loans and the annual growth rate of loans per year is 10 percent. So after one year, the NPL will decline automatically by 2.5 percent (.28/(1+.1)=25.5). If the loan growth rate is 10 percent per year, it means that every 7 years the total amount of loans will double. Consequently, the

[15] Other measures such as transferring bad loans to asset management companies have also been done. But the disposal has been quite slow.

NPLs will be shrunk by half. However, if the assumption is modified to allow the possibility that a 10 percent of new loans will turn bad per year, the NPL ratio as a share of total loans will be reduced by only 2 percent in 7 years! Although the argument to expand the balance sheet to reduce NPLs is dubious, it will probably have some immediate effect on banks' balance sheet in the short term because new NPLs take time to emerge. Therefore, the incentive to expand balance sheet to shrink NPLs on books has prompted banks to start lending aggressively again. Unlike previous cycles of rapid bank credit expansion, this time the bank lending has been able to bypass the loss-making state-owned enterprises and go directly to firms that appear to be profitable under the current market conditions. In particular, property sectors, residential mortgage, consumer loans, and local government guaranteed corporations have seen a rapid rise of loans.

Interest Rate Liberalization: China's on-going interest rate liberalization has also contributed to excessive lending in the banking system. The on-going interest rate liberalization follows a sequencing step that lending rate was liberalized first and deposit rate next depending on maturity so to prevent excessive competition for deposits among banks. Lending rates are currently allowed to move within a range of -10% and 170% of the standard lending rate of 5.31 percent set by the central bank. Because the deposit rate has been lowered over the last couple of years to a historic low (for example, one year deposit rate is only 1.98 percent and the real interest rate has turned negative for depositors), the interest margin has made banks rather profitable to lend. Thus, the strict upholding of lending criteria is often sacrificed at the expense of profit motives. Competition has made lending criteria become even more lax. This is especially true for large firms with good profit prospects. To compete for these firms, banks not only have to lower their lending rates below the 5.31 percent set by the central bank, they have to lower the lending standards, too.

Local government behavior: Local governments in China have played a positive role promoting local economic development and they are a part of the institutional foundations of China's transition to market economy (Qian, 1999). Because local governments can not run deficit by law and they are not allowed to issue bonds, their financial sources are limited to tax revenues and bank loans. Before 1995, local governments were able to influence local branches of the big four SOCBs to lend to local government-owned SOEs or to local government sponsored enterprises. After 1995 and until recently, this channel of finance was cut off as the lendings of the big four SOCBs have been centralized at the headquarters and loan officers are made responsible for loans they made over the life time of the loans. However, with the emergences of regional and city commercial banks in which the local governments are often the major share holders, local governments still can have access to bank loans from their own regional banks. In addition, enterprises sponsored by local government can use land and local government issued guarantees to gain access to loans both from regional city commercial banks as well as the big four SOCBs. Availability of financing from the banking sector allows local governments to engage in large scale of urban sector renewal by building landmarks and in investment in sectors that are at this moment in the upturns of the economic cycle such as automobiles, steel, cement, and construction materials. In the first two months of 2004, the central government sponsored fixed asset investment only increased by 12.1 percent, whereas the local governments-sponsored fixed asset investment increased by 64.9 percent. Local government involvement in fixed asset investment is mainly motivated by local jobs and growth performance and these targets are often used as criteria for promotion of local officials. Another factor that led local governments to rush to invest in similar types of industries is that China's domestic market still has many barriers

for internal trade often erected by the local governments themselves, thus reducing specialization and the scale of economies.[16]

Will inflation accelerate further? China's lingering deflation ended in January 2003. Inflation rate has since accelerated and reached to 3.8 percent in April 2004 (Figure 4). Prices of raw materials and intermediate inputs increased 25 to 35 percent in the last year. The biggest rise in the CPI component is food and within the food category, the grain price has jumped up quickly since the end of 2003. It was 33 percent higher in April compared with to same time last year. A couple of factors have contributed to the sharp increase of grain prices in China. One is that the grain price in China has been stagnant and it is relatively lower than the international price for some time, thus discouraging farmers' incentive from planting grains. The share of acreage devoted to grain production in the total acreage sown per year has declined steady from 73.43 percent in 1995 to 67.2 percent in 2002. The rate of decline in terms of total acreage devoted to grain production was 2.2 percent per year from 1999 to 2002. As the per-unit yield of grain crops has not increased much, China's total output of grain dropped and consequently the grain price is forced up.

But will inflation continue to accelerate over the second half of the year? The existing trend of the consumer price index indicates that CPI is likely to increase further and could exceed 5 percent on a year by year base. However, because of a set of macroeconomic adjustment policies have been put in place to reduce excessive investment in steel, construction materials, chemical, and automobile sectors since the secondary quarter of 2004, it is expected that investment will certainly experience a hard landing. The consumer goods sector probably will not be likely to experience a rapid increase of prices. The reason is that the supply of consumer goods in general still exceeds the demand. Out of 600 key consumer products, 473 of them still exceed demand and 127 of them have

[16] See Section V.

a balanced demand and supply (Huang, 2004). Given the excessive fixed asset investment, the supply of these key consumer products will likely continue to exceed demand because of newly added production capacity. This is perhaps the reason why the overall CPI has not increased sharply as the food price has because the non-food sector occupies 70 percent of the weight in the overall CPI. With regards to food price, would the grain price continue to soar? Probably not for two reasons: One is that acreage devoted to grain production has rebounded by 20 million mu or 8 percent of 2002 total grain acreage. Second, China's imports of grain are likely to increase to partly offset the temporary shortage of grains. In fact, the grain imports could be linked with US trade politics by adding the grain purchase as one of the important import items on the shopping list. Another benefit of increasing food and grain imports is that it can create competition for improving food quality in China as the country is now plagued with shoddy quality of food products that contain high level of pesticide residues and various growth hormones that pose as the greatest public heath threat for future generations. Another important reason that the inflation is not likely to accelerate is that there is no general wage inflation unlike the high inflation episode in 1988 and 1993. The unemployment pressure is still high because of on-going SOE restructuring and China's large rural labor pool, despite the fact that wage rate for skilled labor has increased. The current urban unemployment is still at 11 percent. Thus, it is unlikely that a wage-led general price increase will materialize. Similar to China's growth pattern over the last few years with active fiscal stimulus policies, the current round of the cycle is still an investment-led growth as the consumption share in GDP in China is only 60 percent, while it is 80 percent for developed countries, 74 percent for developing countries, and 69 percent for Asian economies. Only this time, the private investment has picked up.

Will China have a soft-landing this time around? The central bank has applied a set of both direct and indirect monetary policy instruments to cool down the growth by cutting back credit expansions. These measures include: Issuing central bank bills of 60 billion for the purpose of conducting open market operations; raising required reserve ratio to 7.5 percent; using discount window to discipline banks that do not control their increase of new credit; and using moral suasion by issuing restrictive guidelines to reduce lending to property development, steel, electricity generation, urban construction projects, and chemical sector. As some of the investments are insensitive to interest rates, some administrative guidance is also needed. Thus, in addition to efforts of central bank to cool the economy, other government agencies have also initiated coordinated policies to reign in the run-away economy. The Bank Supervision Commission has started on-spot bank examinations on loans to the 5 restrictive sectors. The National Development and Reform Commission is also stern in reigning in investment in construction material sector (steel, cement, and aluminum). It has taken steps to approve to close unauthorized development zones, return illegally claimed farm land, and terminate inefficient investments that do not have economies of scale. Ministry of Land and Natural Resources has closed 27000 development zones so far. Ministry of Finance has recently postponed issuing of treasury bonds of 110 billion and has announced that its active fiscal policy is now at the neutral position. In addition, China's Security and Regulatory Commission stopped taking application of IPOs for firms in steel, cement, and aluminum related sectors and listed firms in these three sectors have been constrained from issuing new shares.

These coordinated policy measures have started to take shape, but their effectiveness still remains to be seen. Because the big four commercial banks are still within the control of the state which dominate the banking sector, as long as the policy makers can effectively decelerate

rapid bank lending to the 5 overheating sectors, it is still possible for the central government to simmer down the red hot sectors and bring the economy to a soft-landing. However, whether the soft-landing will be a smooth one will hinge on whether the central government can use more market based measures to cool down the economy. One positive external development is that the US Fed is very likely to raise interest rate because of a wage-led price increase in the US has emerged. The expected increase of US asset return will reverse capital flows to China and the emerging markets in general, thus mitigating the pressure on the RMB revaluation and blowing steam out of the Chinese economy. In light of China's domestic policy measures and the recent external development, the probability for the government to secure a soft-landing becomes bigger.

IV. An Optimal Exchange Regime for China

Exchange regimes are generally classified as fixed, intermediate, and floating arrangements. Within each category there are also finer distinctions that depend on frequency of adjustment and degrees of changes. Table 10 presented a simple classification of exchange regimes. The question is, at this stage of economic development, what is an optimal exchange rate regime for China? Before answering this question, let's first examine empirical evidences as what types of exchange rate regime bring about better results in terms of price stability and economic growth. According to an IMF study (2003), among 5 categories of exchange rate regimes, the one with limited flexibility has best track record because it is associated with the highest per-capita GDP growth and the lowest annual inflation during the period between 1970 and 2001. The managed floating regime has the second best per-capita income record but rather high annual inflation. The pegged exchange rate regime has a slightly lower growth record than the managed floating but its inflation performance is

better than managed floating. In both categories of income growth and inflation rate, freely floating and dual or multiple exchange rate regimes performed the worst (Table 11).

Open economies will always face the trilemma problems: The tradeoffs among independent monetary policy, stability in the exchange rate, and the free movement of capital (Mundell, 1963). Among the three objectives, only two policy objectives can be reached simultaneously. Figure 5 puts the three objectives at the vertices of a triangle and the three connecting lines represent the tradeoff for any two policy objectives to be achieved simultaneously. At this juncture, China does not allow freedom for capital to move in and out of the country. Thus it can have a fixed exchange rate regime and autonomy of its monetary policy. In this sense, China's fixed exchange rate regime does not pose as a fundamental threat to its policy objective, that is, independent monetary policy. In fact, recent steps in liberalizing capital outflows (See box 1) has certainly made China's capital controls more porous, which in turn will threat the inherent existing policy consistency between the fixed rate and its autonomous monetary policy. If China chooses to relax its capital control, it should then think of moving to a more flexibility exchange rate regime. Otherwise, it should choose to tighten its capital control.

Box1: Recent Changes on Regulations on Foreign Exchange Controls

- March 2003: Beijing, Tianjin, Sichuan, and Helongjiang started experiments to relax Chinese firms FDI requirement. RMB assets can be used to exchange foreign currency for FDI purposes.
- May 2003: If a payment made by the foreign currency credit card exceeds the foreign currency deposit, the difference can be paid using RMB.
- August, 2003: Multinational corporations' non-trade related payments are allowed to be conducted using either foreign currency or RMB.
- September, 2003: Firms do not have to submit foreign exchange earned from current account related earnings such as international engineering contract, labor contract, international shipping and fees from shipping service.
- September, 2003: Residents and non-residents can bring in and out $5000 per person. Domestic residents for overseas travel can carry up to $5000 cash per person.

Why is the current fixed exchange rate regime still workable?

Although both the US Treasury and some prominent economists have advised that China will be better served if it were to move to a flexible exchange rate regime quickly (Eichengreen, 2004, Goldstein and Lardy, 2003), the Chinese government, while acknowledging its intention to eventually move to a flexible exchange rate regime, has maintained the importance of RMB's stability in the short term. One could interpret such intransigence as that the Chinese government does not want to yield to foreign pressure for reasons of saving face. On the other hand, if we take China's development strategy and its state of institutional convergence to a market economy into consideration, their hesitance to move to a flexible exchange rate is quite understandable. China is in fact using the pegged exchange rate as a nominal anchor so that it could leverage on credibility and better institutions of the US. It is in fact running an adjustable pegged exchange rate akin to the pre-1971 Bretton Woods System for two reasons. The first reason is related to its export-led development strategy and such a strategy requires a stable if not under-valued currency, capital controls and accumulation of foreign exchange reserves largely denominated in the center country currency, the US dollar (Dooley,

Folkerts-Landau, and Garber, 2003). The second reason is related to the lack of development of its own credible domestic institutions. China's central bank is directly under the control of the State Council and it has limited independence in conducting monetary policy. The limited role of independence may also result from the fact that the financial sector is still dominated by the state. Thus, central bank independence does not make much difference. Under the current circumstances, the central bank independence in China could run the risk of becoming bureaucratic independence because to which branch of the government the central bank is accountable is not clear.[17] Thus, if the institutional credibility is not yet formed, some kind of pre-commitment such as the fixed peg may be a better way to prevent the time inconsistency problem. In a theoretical framework, Barro and Gordon (1983) demonstrated convincely that by instituting a monetary rule, policy makers can prevent monetary policy inconsistency caused by surprise inflation under ration expectation. At a more technical level, although China's central bank is able to use open market operations, its main monetary policy instrument remains to target the quantity of money, rather than the interest rate, because the market mechanism of interest rate determination is still lacking. China's ill-developed money market and its shallow government bond market will give rise to difficulties in managing flexible exchange rate as well. Thus, given its development strategy and its stage of institutional development, it is rational to use the exchange rate as a nominal anchor so the country can leverage on a foreign institution that has greater credibility. In the past, for countries that do not have domestic institutional credibility, tying one's currency to gold is an act of credible commitment (Bordo, 2003). During the pre-collapse of the Bretton Woods System, dollar was used as a credible anchor as long as the US is running a prudent monetary policy.

[17] If it is accountable to the National People's Congress, its independence will be even less given the rubber stamp nature of the legislative branch of the Chinese government.

The reason that China has pegged its currency for so long is because the Greenspan-led Fed has done a marvelous job in maintaining the price stability in the US so that the US can maintain sustained and robust economic growth for the longest period of time in the post-War history. In fact, leaving the difficult task of managing exchange rate to the Fed, the Chinese policy makers can pursue its domestic development agenda with more focus as long as they can maintain effective capital control. In fact, this strategy has worked well for Japan and the Western European countries before the fall of the 1971 Bretton Woods System. These economies had quickly recovered from their ruinous war-torn economies. As their per capita income caught up with that of the US, their institutional credibility was also regained. As a result of such strategy, these economies can graduate to move to the center (Dooley, Folkerts-Landau, and Garber, 2003).

It may be argued that China may not be as lucky as those economies that have successfully moved to the center because today's international monetary arrangement no longer allows such strategy. In particular, the US has less tolerance nowadays for running a large current account deficit and accumulating foreign debt. In addition, the global financial markets are more integrated and capital control has become much more difficult to enforce. Indeed, Cheun-Chinn-Eiji (2003) examines three criteria of economic integration, namely real interest parity, uncovered interest parity, and relative purchasing power parity. They find that the existing evidence indicates that China is surprisingly positive for integration with the US. If this evidence can stand the rigorous test of statistics, it is indeed a positive sign for pegging the dollar for reasons of both economic and institutional convergence. Such integration will also help shore up China's own institutions eventually. On the other hand, the Cheun-Chinn-Eiji result also indicates that as capital controls become less restrictive,

China's ability to run independent monetary policy has become less effective.

Preconditions to move to a flexible exchange rate regime: While China's pegged exchange rate regime is still in place, recent policy initiatives to relax capital controls indicate that China's capital account will become more porous in the future. As capital controls are gradually relaxed, the monetary authority will therefore face increased difficulty in maintaining its exchange rate stability and conducting autonomous monetary policy, thus raising fundamental policy inconsistency. If China ever decides to further relax its capital controls, it should now have a concrete strategy to make a transition from the current system of using the exchange rate as an anchor to a system that relies on credible domestic nominal anchors, which in turn require some minimum institutions that can support a domestic nominal anchor credibly. These basic institutions should include central bank independence in the sense of independent from financing fiscal deficits, inflation targeting to establish credibility in maintaining price stability (Bordo, 2003 and Svensson, 2002), and institutions that can monitoring currency mismatches due to increased volatility of a flexible exchange rate regime(Goldstein, 2002).

At this juncture, although China does not have the true sense of central bank independence, it does still have the basic requirement for central bank independence. That is, its 1995 Central Bank Law clearly stipulates that the central bank is forbidden to monetize government fiscal deficits.

China has taken a gradual approach to interest rate liberalization. It is very likely that during the course of interest rate liberalization that the monetary authority will face challenges in maintaining goals of inflation targeting as the interest rate liberalization tends to increase uncertainties in financial contracts and therefore cause interest rate volatility. In

addition, interest rate liberalization can also erode the franchise value of the banking sector, thus raising macroeconomic instability. Therefore, the on-going domestic interest rate liberalization will certainly complicate China's move to a monetary regime that is centered on inflation targeting. During the transition period, domestic market development such as money market, forward exchange rate market, developing hedging instruments, and forming the habit of using hedges to manage risks is also critical in creating credible domestic nominal anchors.

It is recognized that it is not inconsistent to move towards a flexible exchange rate regime while still keeping the capital control in place (Eichengreen, 2004). Capital controls can still give policy makers breathing time to build strong domestic monetary institutions. But the question is what kind of intermediate regime is best suited for China. Some have offered a band, a basket peg, and a crawling peg after China has exited from the existing pegged exchange rate regime (Williamson, 2003, Chan-Lee, *et al*, 2002 and Kuroda, 2004). Despite the advantages of flexibility of these intermediate regimes, they are nevertheless susceptible to big shocks, either internal or external, inability to induce stabilizing speculation, and furnishing credible nominal anchor (Glodstein, 2002). Thus, a managed floating plus, a version of an intermediate regime proposed by Goldstein (2002) that allows inherent exchange rate flexibility, if it is also supported by credible nominal anchor such as inflation targeting and central bank independence and complemented by closely monitoring currency mismatches, can probably work better for China.

Therefore, before moving to a flexible exchange rate regime, a careful sequencing strategy is needed for setting policy priorities. Because these institutions for creating a domestic nominal anchor take time to build, it is thus clear that the current fixed and adjustable pegged regime could remain in the short term while China is busying building domestic

nominal anchors to replace the pegged exchange rate as an anchor. During the transition period, however, China should strengthen its capital control, rather than relaxing it, contrary to the current policy prescription.

V. China's Role in the World Economic Imbalance: A New Development Paradigm

When institutional preconditions are satisfied and at a right timing, China should move its current exchange rate regime to a more flexible one, preferably a managed floating with active monitoring of currency mismatches and foreign debt leverage. In the meantime, given the global imbalances and the increased US intolerance for China to access its market, it is time for China to contemplate ways to create sustained domestic demand so to diversify the risk of betting on China's future too much on the external market. There are three areas that China should focus on to increase domestic absorption so to play an active part to alleviate global imbalances: One is to increase investment in rural sector to reduce rural urban income inequality and speed up the urbanization process. The second one is to remove and reduce domestic non-tariff barriers and speed up the integration process of the domestic market. The third area is to reduce physical barriers that can complement the unification of the domestic market.

Reducing the urban-rural income inequality and speed up urbanization: China's fiscal pump and priming, initiated in the midst of the Asian financial crisis to uphold its growth target, have run out of steam over time as it has not been effective in generating self-sustaining domestic demand. Measured by its contribution to GDP growth, domestic demand has been rather flat over the last four years. Indeed, government demand on average amounted up to 50 percent of domestic demand (Table 12). The explanation of a low multiplier effect of these fiscal stimulus packages lies

on the fact that they in the past have a biased focus on urban areas by building non-productive but symbolic infrastructure projects such as magnificent city halls and monumental sky scrapers. Their economic returns may take years to recover. What is worse is that these infrastructure investments are not incentive compatible as the local governments benefit the spending and the central government picks up the tabs, thus giving rise to pervasive moral hazard and soft budget constraint problems. Recognizing these existing problems, the Ministry of Finance, which carries out most of the programs, is lobbying to end such programs as they may jeopardize its long-term fiscal health. Indeed, they have good reasons to fear so. Although China's current domestic debt level on book is still manageable at about 20 percent of GDP, if counting its potential costs of clearing up mountains of non-performing loans (NPLs) in its state owned banking system, its liability in unpaid pensions, as well as external debt guarantees, China's national debt as a percent of GDP could easily climb above 100 percent.[18] Given its small revenue to GDP ratio at 16 percent currently, the fiscal stance is clearly not sustainable.

Another reason the fiscal stimulus packages have been ineffective may have to do with where they have been placed. While over 70 percent of the Chinese population still lives in the rural area, the infrastructure needs in the rural sector have been largely ignored since China's great economic reform. At present, the rural sector suffers from inadequate roads, dilapidated irrigation systems, poor education facilities, and a non-existent rural health system. China is now haunted by these inadequacies as evidenced by more frequent floods, large scale of rural migration to the urban area in search of jobs, and more recently, the occurrence of the highly contagious severe acute repertory symptom (SARS). It is the depressed rural sector that should be given priority for the government's

[18] See Chan-Lee, Liu and Yoshitomi (2002).

fiscal pump and priming since the investment in this sector can help reduce large regional and income inequalities. In addition, investment returns in agriculture research and extension, irrigation system, education, and health tend to be higher (Fan, Zhang, and Zhang, 2003). Empirical evidences[19] have also shown that by focusing on addressing income and regional inequality issues, the formidable force of economic convergence at both the individual and the regional level would unleash large productivity gains and bear long-term benefits.

Another compelling reason to invest in the rural sector through infrastructure spending is that it would raise productivities of the rural poor and thus the income of the population that is close to that of the US, the EU and Japan combined. The elevated income level in the rural sector will raise the current domestic demand that is currently not able to meet the excess capacity of the Chinese manufacturing sector. As a result, China has to export to the rest of the world. Indeed, China's growth has been mainly pulled by government fiscal stimulus packages and external demand in recent years. This is also reflected by a very high percentage of trade to GDP ratio, which stands at close to 50 percent. As China is a continental-sized economy, the current trade to GDP ratio is rather abnormal and obviously unsustainable. If China's large domestic demand can be raised, it will alleviate the fear associated with the emergence of China that integrating large and populous developing economies will tend to lead to price deflation in the manufactured goods sector because of large relative wage differentials.

The existing urbanization process in China could be further sped up if farm land can be distributed to farmers for good. This drastic ownership change will allow land to be transacted to those who can produce agriculture products the most efficient. Better land allocation plus

[19] See Robert J. Barro (1999), "Inequality, Growth, and Investment," National Bureau of Economic Research Working Paper: 7038.

increased scale of economies would further raise China's agriculture productivity.[20] In addition, clearer property rights will make land as assets for use as collateral, which in turn will help bring about the true emergence of rural enterprises under a solid institutional footing.

Unifying the national market and reducing domestic non-tariff barriers: Despite China's rapid integration with the global economy, its domestic economic integration is still rather fragmented and is still suffering from rampant local protections. In general, there are four approaches to measuring these domestic market barriers: The first approach examines the disparity of wage and investment returns across regions within a country conditioning on a set of underlying factors such as productivity, geography, and degrees of industrialization. Fan, Robinson and Zhang (2003) using such an approach find that rates of return on capital and wage rates display no convergence across the country. The second approach analyzes the similarity in the production specialization across Chinese provinces. Chen (2002) and Bai, et al (2002) find that the production structure across provinces shows a great similarity, indicating there is not much specialization across Chinese provinces. The third approach looks at the inter-provincial trade. Poncet (2001 and 2002) shows that the average border effect among China's provinces was about 51 percent in 1997, which is much higher than the border effect estimated for trade between EU member countries. The result thus verifies that the local protection is serious in China. The fourth approach studies the correlation of business cycles between the Western region and the coastal area. Xu and Voon (2002) find that the Western region in China appears to have a business cycle of their own that is quite different from that of the coastal region, indicating the lack of macroeconomic integration. Although the severity of the market

[20] The rapid increase of agriculture productivity after land reform in Taiwan, Vietnam and other Asian economies are cases in point (CEQ, 2004)

segmentation in China has been reduced greatly over time, these studies have shown that the problem remains serious. To be sure, China's mountainous terrain has a part to play in its market segmentation; but a significant part of the barriers to domestic trade can be still traced to the protectionist tendencies of local governments and these man-made barriers appear to be much more difficult to overcome than the physical barriers of the nature.

The experiences of the US and the EU have shown that market integration has been positively correlated to economic growth. Indeed, the rate of convergence between the rich and poor region is about 2 percent a year (Sala-i-Martin, 1990 and 1991) and the key to regional convergence is labor mobility. To speed up the domestic market integration, China should perhaps follow the US example by enacting a version of the Inter-State Commerce Act to use legal means to bring down domestic trade barriers. In addition, it should create conditions that can facilitate both capital and labor to move freely across the country. By reducing domestic trade barriers, it will encourage production specialization among Chinese provinces, thus increasing efficiency and raising growth potentials. Thus, China can perhaps grow faster than before. Unified market will also expand domestic demand, thus reducing China's excessive reliance on the external market, in particular, the US market.

Reducing the tyranny of distance: China has made great strides in improving its national and local transportation network. For example, the prices of some grain products have become more equal than before owing to the improved transportation infrastructure (Rozelle and Huang, 2002). However, by various measures, the transport system is still under developed. It is estimated that logistic costs account for 30-40 percent of the total cost of manufactured goods in China, compared to about 10 percent in Europe, 14 percent in East Asia, and 5 to 20 percent in the US. Within the logistics cost, transportation costs account for about half of the

total, which is twice as high as in developed countries (World Bank, 2003 and Gibson, 2001). The infrastructure needs as such require China to draw both from its domestic finance as well as external finance. China's increased demand for upgrading its transportation system will create positive demand from the rest of the world, thus helping stimulate world economic growth.

Developing the Municipal Government Bond Market: Then the question is how to fund these potentially large infrastructure needs in the rural sector, urbanization, and infrastructure in transport in the medium term? Obviously what the central government can do is rather limited given its revenue to GDP ratio and its inadequate ability to conduct effective fiscal transfers to shrink large regional income disparities. Thus private capital both domestic and foreign must be allowed to participate in this endeavor. After twenty years of economic reform, China is no longer a capital-deprived country. Its stock of savings has exceeded 100 percent of GDP, in addition to its large foreign exchange reserves. How to effectively utilize this stock of wealth is what the government will need to address urgently. Inefficient capital allocation can be better addressed if China can rethink its capital market development strategy by giving priority to its government and municipal bond market development. This market will help meet the physical infrastructure need in the rural sector because of its large amount of domestic savings. If long-term bonds can be issued by local government with some credit enhancement from the central government for certain provinces in need, in addition to measures such as enforcing the already existing balanced budget law for Chinese provinces so to constrain excessive local spending, credit ratings to assess local government financial health, and an authorization procedure by the central government at the beginning stage of the market development, the need of rural investment, urbanization, and transport system upgrade can be still met because of China's large stock of savings. Of course, this does

not exclude the roles of foreign participation. These initiatives will certainly stimulate the development of China's municipal government bond market.

The fixed income market, once allowed to be developed, will offer viable investment vehicles for China's pension funds and for small investors who fear the stock market is too risky and volatile to put their life long savings. This segment of capital market could also offer hedging instruments for banks and securities firms to manage risks, thus contributing to the improvement of their profit margin and the overall efficiency of China's capital market. In fact, these local government bond issues are another form of fiscal expansionary policies, if accommodated by monetary policies, will raise productivity of rural sector and the rural income. Higher rural income will substantially raise domestic demand, thus putting an upward pressure on the existing price level of the economy. The combined expansionary fiscal and monetary policies will effectively stimulate domestic demand by reducing China's reliance for the external market. In addition, in the medium run, this reflation effect will bring about a wage-led general price increase, thus giving rise to a real appreciation of the renminbi. A real appreciation of RMB will increase domestic absorption. Less reliance on external demand will also bring in confidence of the Chinese economy as it will be less susceptible to a global slowdown. With robust domestic demand, China will then be reckoned as an important economic power to help resurrect the sputtering world economy.

Therefore, by creating domestic demand through investment in rural sector, speeding up the urbanization process, unifying domestic market, and reducing physical barriers to markets, China can play an important role in helping mitigating the global imbalances.

VI. Concluding Remarks

The calls for RMB to revalue are mainly motivated by China's large current account imbalances with the United States. As the US is running the twin deficits again at a large magnitude, the presidential election trade politics in the US has further complicated the issue. In fact, the RMB-dollar non-deliverable future market does not indicate that the RMB is very much undervalued. At this stage, China could simply use some structural measures such as phasing out or revoking the value-added export rebates and reducing fiscal incentives to attract FDI to effectively address the controversies surrounding the RMB's valuation issue. In addition, China can address the US concerns over China's large trade surplus through some proactive bilateral trade initiatives.

Some have also linked China's current macroeconomic overheating to its undervalued currency. However, the empirical evidence does not seem to support this standard textbook explanation. China's economic overheating was fundamentally caused by the banking sector's incentive to expand balance sheet so to reduce the NPL ratio on the book, its interest rate liberalization, and the local government over-investment. Unlike the previous cyclical upturns, the present one is not likely to cause a runaway inflation because China has not completely overcome the problem of over capacity. The recent rapid expansion in fixed assets investment will only exacerbate the over capacity problem in the near future. The large increase of the grain price, however, is cyclical in nature and can be partially offset by increased imports and by increasing the acreage devoted to grain production in the coming years.

China's pegged exchange rate regime does not reveal any fundamental policy inconsistency as long as the capital control is in place and even strengthened. However, to deflect the pressure of capital inflows, China has recently relaxed capital controls in certain areas, thus making its capital control more porous and intensifying the policy inconsistency

between stable exchange rate and autonomous monetary policy. If China intends to make its capital account more open, it should then think of moving to an intermediate exchange rate regime. Perhaps an enhanced managed floating will be a better one. However, such a move requires credible domestic nominal anchors such as central bank independence and inflation targeting and they should be complemented with mechanism that can closely monitor potential currency mismatches. Thus some policy sequencing is needed befor such a move. As these institutions take time to build, China is thus still better served with the existing exchange rate regime as long as it can strengthen its capital control.

Without changing its exchange rate regime in the short run, China can nevertheless play an important role in mitigating the current global imbalances. Because of China's vast infrastructure needs, developed economies can tap into this demand by supplying the needed capital goods and technology. In this sense, there are still strong complementarities between the Chinese economy and the rest of the world. These medium term policy initiatives will also raise the productivity and efficiency of the Chinese economy, thus permanently raising China's economic growth rate. Increased domestic absorption will reduce China's excessive reliance on external demand. In this way, China can not only sustain its own economic growth, it will also act as a potent locomotive to help pull the global economy out of it current imbalances.

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Table 1: China's share in world exports of manufactures (1990-2000)

	1990	2000	Gain/Loss
World	100	100	
Developed Countries	80.4	69.4	-11
Developing Countries	17.5	27.4	9.9
Asia	12.6	19.9	7.3
China	1.9	4.7	2.8
Asia-6	9.1	12.2	3.1
Other Asia	1.6	2.9	1.3

Note: Asia-6: Taiwan, Hong Kong, Korea, Malaysia, Singapore, and Thailand
Note: Re-exports for Hong Kong and Singapore are excluded
Source: Direction of Trade, IMF.

Table 2: China's Position in World Trade

	Merchandise Exports		Merchandise Imports	
	% of World Total in 2000	Growth: 1999-2000	% of World Total in 2000	Growth 1990-2000
World	100	6	100	6
Asia	26.7	8.4	22.8	7.6
Japan	7.7	5.2	5.9	4.9
China	4	14.9	3.5	15.5
Hong Kong	3.3	n.a.	3.3	n.a.
	Services Exports		Services Imports	
	% of World Total in 2000	Growth: 1999-2000	% of World Total in 2000	Growth 1990-2000
World	100	6	100	6
Asia	21.1	9	25.4	7
Japan	4.7	5	8.1	3
China	2.1	18	2.5	24
Hong Kong	2.9	0.09	1.8	0.09

Table 3: China's Trade Structure: Ordinary Trade vs. Processed Trade (1-6, 2001) (Billions of US Dollars)

	Export	Imports	Balance
Total Trade	124.6	116.4	8.2
Ordinary Trade	52.9	54.6	-1.7
Processed Trade	68.4	44.2	24.2

Source; China Customs Yearbook,2001

Table 4: China's Tariff, 1982-2002, (Percent and Billions of Dollars)

Year	Unweighted Average	Weighted Average	Dispersion	Maxmimu	Trade Balance
1982	55.6	..	..	..	3
1985	43.3	..	..	..	-14.9
1988	43.7	..	..	..	-7.8
1991	44.1	..	..	..	8.1
1992	42.9	40.6	..	220	4.3
1993	39.9	38.4	29.9	220	-12.2
1994	36.3	35.5	27.9	..	5.4
1995	35.2	26.8	..	220	16.7
1996	23.6	22.6	17.4	121.6	12.2
1997	17.6	16	13	121.6	40.4
1998	17.5	15.7	13	121.6	43.4
2000	16.4	..	..	..	29.2
2001	15.3	9.1	12.1	121.6	24.1
2002	12.3	6.4	9.1	71	30.3

Source; IMF: World Economic Outlook, 2004, and China Customs Statistics, various issues.

Table 5: Declining Terms of Trade with Key Trading Partners (1993-2000)

Products	USA	EU	Japan	NIES	ASEAN	Other LDCs
All Products	-23	-28	-26	-17	-8	-3
Non-Fuel Primary Products	0	-36	4	5	34	15
Manufactured Goods	-24	-27	-28	-20	-24	-21
Labor or Resource Intensive Products	-48	-12	-37	-2	-9	-7
Low-Tech Products	-27	-36	-15	-5	-14	-13
Medium-Tech Products	-42	-28	-31	-28	-26	-59
High-Tech Products	13	-23	-35	-29	-43	-7

Source: Zheng and Zhao (2002) based on statistics from the Chinese Customs Statistic Yearbook

Table 6: Fixed Asset Investment (100 million yuan)

Year	Total	Growth Rate	Industry	Growth Rate
2000	24242.82		7699.03	9.3
2001	27826.62	14.8	8371.83	7.5
2003	32941.76	18.4	10319.96	22.2
2004			14494.15	40.4

Source: China Statistics Yearbook
Note: 2004 figures are for the first quarter.

Table 7: Sources of Finance (100 million yuan)

	Total			Weights		
	2001	2002	2003	2001	2002	2003
Total Finance	16555	23976	35154	100	100	100
Bank Finance	12558	19228	29936	75.9	80.2	85.1
Debt Finance	2598	3461	3525	15.7	14.4	10
Corporate Bond	147	325	336	0.9	1.4	1
Equity Finance	1252	962	1357	7.6	4	3.9

Source: Huang (2004)

Table 8: Current account balance, capital account balance, reserves accumulations and M2 Growth (Billions of US Dollars)

	1998	1999	2000	2001	2002	2003	2004[a]
Current Account	29.3	15.7	20.5	17.4	35.4	29.5	-7.8
Capital Account	-22.8	-7.1	-10	29.9	40.1	90.5	n.a.
Foreign Direct Investment	43.8	38.8	38.4	44.2	49.3	54.7	n.a.
Other capital flows	-66.6	-45.9	-48.4	-14.3	-9.2	35.8	n.a.
Change of Reserves	6.5	8.6	10.5	47.3	75.5	120	113.5
Total Reserves	146.3	154.9	165.4	212.7	288.2	408.2	439.8
Reserve Growth	4.6	5.9	6.8	28.6	35.5	41.6	39.2
M2 Growth	14.8	14.7	12.3	17.6	16.9	19.6	19.1
Credit Growth	15.5	8.3	6.0	13.0	16.9	21.1	18

Source: Calculated from data publised on PBOC's website.
Note: a. Figure for 2004 is for January to March 2003.

Table 9: Granger Causality Test between M2 and Foreign Exchange Reserves

Dependent Variable: M2		
Variables	F-Statistics	Significance
M2	10.53	0
Foreign Exchange Reserves	0.67	0.75

Dependent Variable: Foreign Exchange Reserve		
Variables	F-Statistics	Significance
M2	2.57	0.04
Foreign Exchange Reserve	52.7	0

Source: Calculated by the author

Table 10: Exchange Rate Regimes

I. Fixed Arragements
- a) Currency Unions
- b) Currency Boards (Dollarization)
- c) Truly Fiexed Exchange Rates

II. Intermediate Arrangements
- a) Adjustable Pegs
- b) Crawling Pegs
- c) Basket Pegs
- d) Target Zone and Bands

III. Floats
- a) Managed Floats
- b) Free Floats

Source: Frankel (1999)

Table 11: Performance of Exchange Rate Regimes

Classification Scheme	Peg	Limited Flexibility	Managed Floating	Freely Floating	Dual or Multiple Exchange Rates
Annual Inflation Rate					
Standard	38.8	5.3	74.8	173.9	n.a
Dual Rates	20.7	10.1	29.7	45.5	167.4
Per-Capital GDP Growth					
Standard	1.4	2.2	1.9	0.5	n.a
Dual Rates	1.7	2.6	1.5	1.1	0.8

Source: IMF, World Economic Outlook.

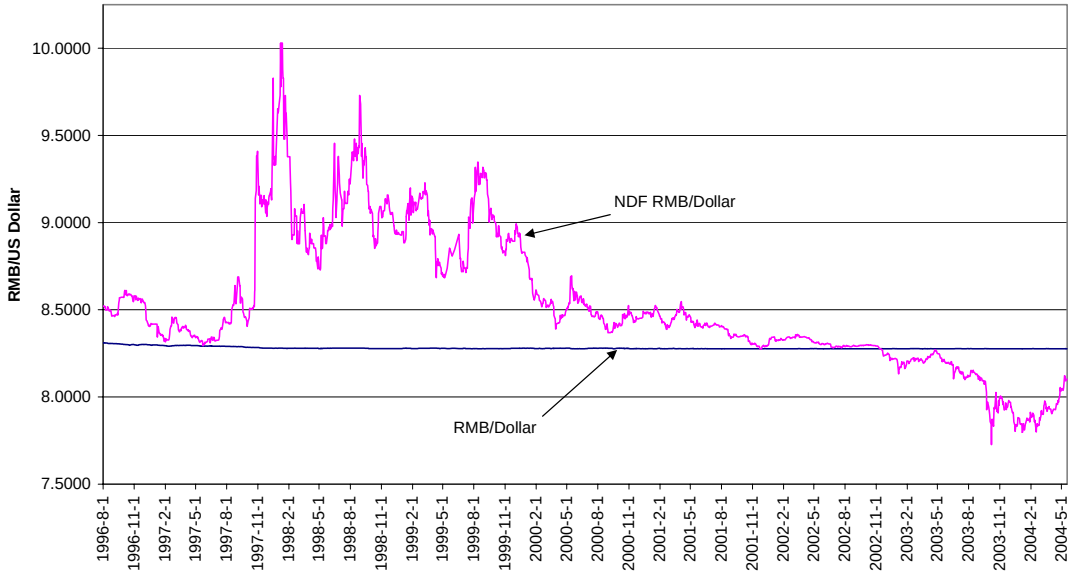
Table 12: Contribution to Real GDP Growth, 1997-2002 (%)

	1997.0	1998.0	1999.0	2000.0	2001.0	2002.0
Total Domestic Demand	7.0	7.0	8.4	6.9	7.8	7.5
Private Demand	3.4	3.6	5.5	6.7	4.7	3.7
Government Demand	2.3	4.6	2.4	1.9	3.5	4.4
External Demand	1.8	0.8	-1.3	1.1	-0.3	0.5
Export	2.9	1.4	2.9	6.3	2.4	7.5
Import	-2.1	-0.6	-4.3	-5.3	-2.7	-7.0
Growth	8.8	7.8	7.1	8.0	7.5	8.0

Source: WDI and Author's Calculation

Note: Private demand means non-SOE investment

Figure 1: Non-Deliverable Forward RMB-Dollar Rate



Daily rate from 01/08/96 to 05/17/04
Source: (1) 1996-97: Prebon Yamane (Hong Kong) Ltd. (2) From 1998 onwards: Reuters, and HKMA

Figure 2: China's Trade Surplus with Key Trading Partners

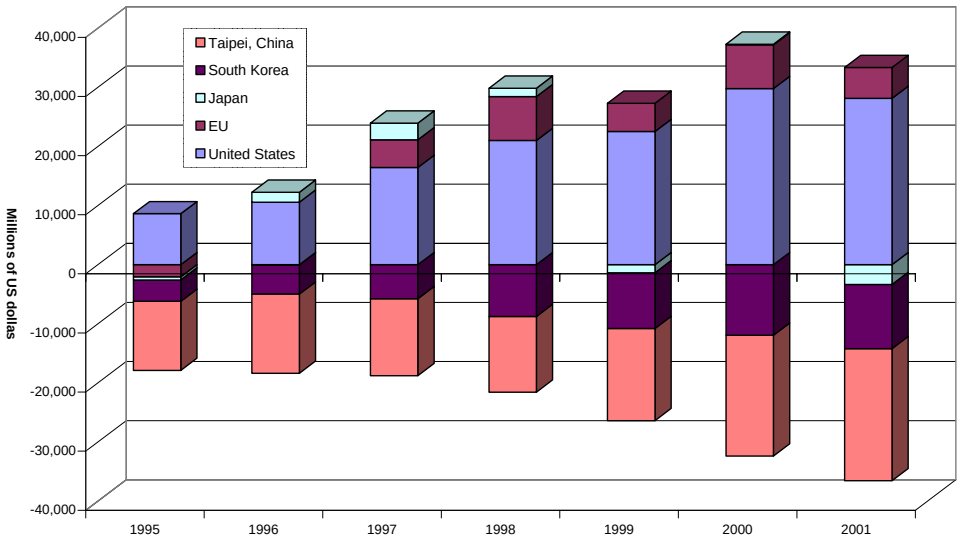


Figure 3: Electricty Generation and GDP Growth Rate

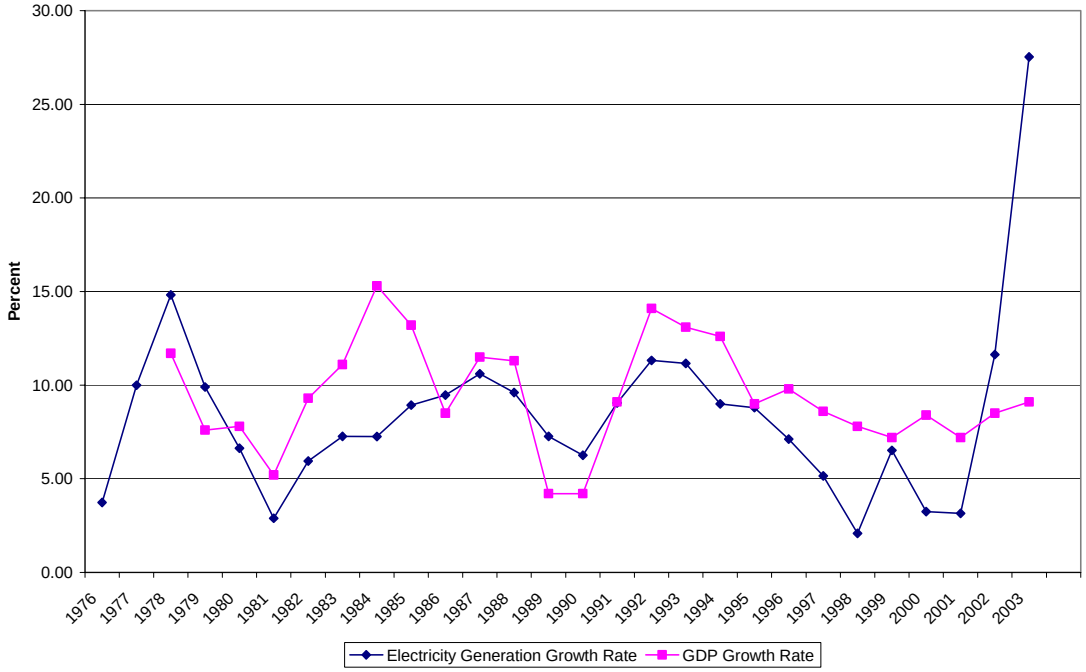
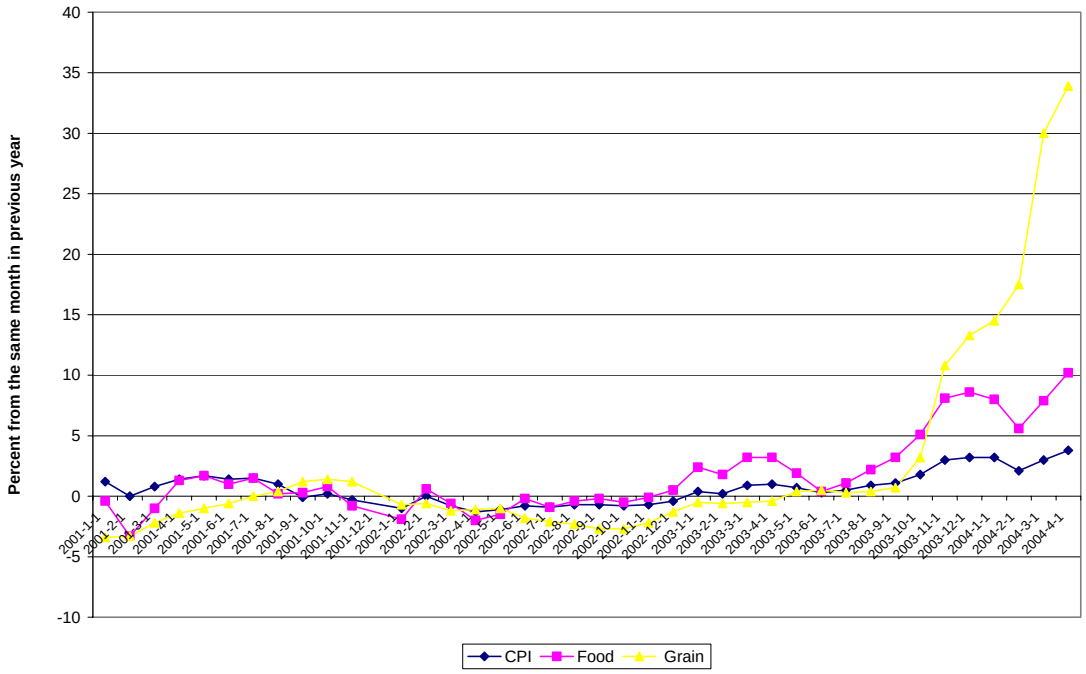


Figure 4: Overall Consumer, Food and Grain Price Indexes



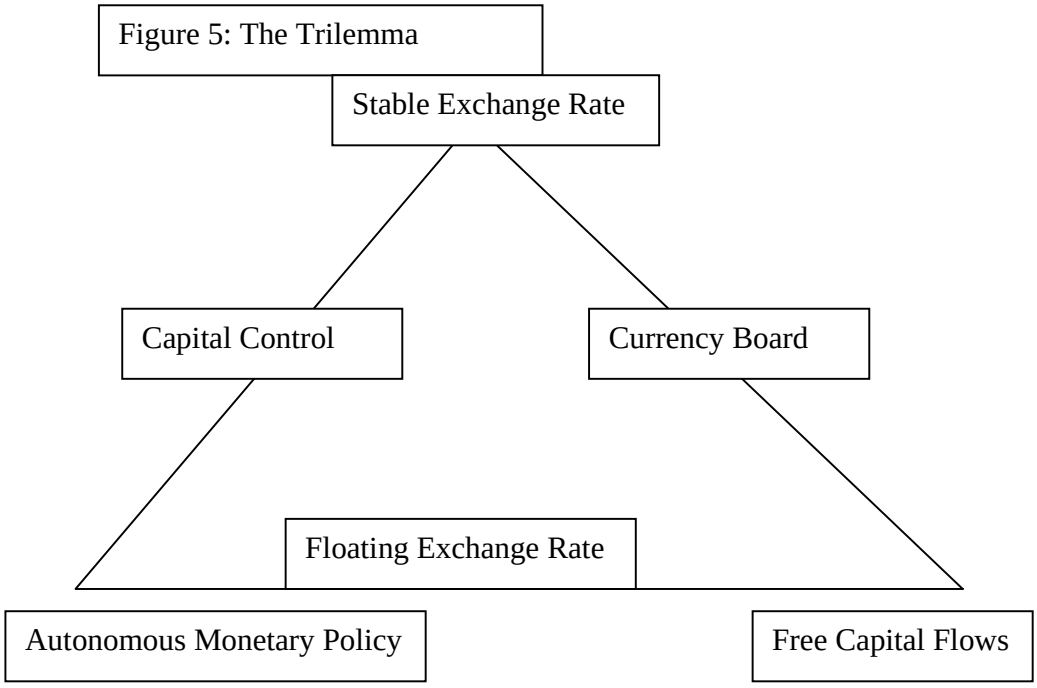


Figure 5: The Trilemma
Stable Exchange Rate
Capital Control
Currency Board
Floating Exchange Rate
Autonomous Monetary Policy
Free Capital Flows