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CHINA’S RAPID ACCUMULATION OF FOREIGN EXCHANGE RESERVES AND ITS POLICY IMPLICATIONS

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The China Policy Institute was set up to analyse critical policy challenges faced by China in its rapid development. Its goals are to help expand the knowledge and understanding of contemporary China in Britain, Europe and worldwide, to help build a more informed dialogue between China and the UK and Europe, and to contribute to government and business strategies.
Summary

China’s foreign exchange reserves are reported to have reached $853.7bn in late February 2006 when China surpassed Japan to become the world’s largest holder of foreign exchange. Beijing is now faced with the growing challenge as to how to handle these vast reserves effectively.

China’s soaring foreign exchange reserves not only show how its overall strength has grown, but have also created internal and external pressures on the balance the Chinese economy.

The accumulation of large foreign exchange reserves was beneficial during the process of economic reform, but the recent further rise has tended to exacerbate its imbalance of payments, with risks for China’s financial system. The Chinese government has started to consider whether its accumulated foreign exchange reserves are excessive and intends to undertake effective measures to address the issue.

Although Chinese economists diverge in their views on the optimal size of the reserves, most believe that it would be beneficial to decrease them to some extent.

It is estimated that foreign exchange reserves of around $400bn would have been appropriate in 2005 under circumstances of a managed floating exchange rate regime and capital control. China’s actual reserves have far exceeded its normal demand.

The scarring experience of the 1997 East Asian crisis underlined the need for China to hold sufficient foreign exchange reserves. Beijing should neither accumulate excessive reserves nor over-divest, so as to maintain an optimal level that will maximize net benefits for China as a whole.

Four main policy options are available for China to achieve its target for foreign exchange reserves, including spending and investing foreign exchange reserves, liberalization of the capital account, diversification of foreign exchange reserves, and a switch in holders of foreign exchange reserves.

Spending and investing in foreign exchange reserves can be undertaken in combination with liberalization in the capital account, given careful consideration of the risks involved. Liberalization should be extensive but gradual so that companies and individuals can adjust to changes in financial markets and manage portfolios while avoiding unnecessary risks.

During the first two months of 2006 the continued rapid build-up of foreign exchange reserves suggests that speculative inflows are still strong. Given that the accumulation mode continues, the government must beware of speculative capital inflows and encourage reasonable capital outflows in the near future.
China’s Rapid Accumulation in Foreign Exchange Reserves and Its Policy Implications

By Jingtao Yi*

China Overtakes Japan as the Largest Holder of Foreign Exchange Reserves

1.1 According to China Business News, on 28 March 2006 China’s foreign exchange reserves reached $853.7bn at the end of February 2006, against Japan’s $850.1bn. China has thus surpassed Japan to become the world’s largest holder of foreign exchange. What does this imply for China?

1.2 China’s increasing foreign exchange reserves not only show that its overall economic strength has grown, but they have also caused internal and external pressure. Internally, government debts are mounting due to official operations of sterilization of net capital inflows and inflationary pressure is increasing. Externally, China faces intensified pressure for a rapid appreciation of its currency. The huge foreign exchange reserves have implications for causing imbalance in the country’s economy.

1.3 The disclosure of the surge in reserves coincided with calls by influential U.S. lawmakers for legislation aimed at forcing the administration to take a tougher policy stand on China for keeping its currency relatively weak. This could encourage US trade protectionists to press Beijing for a rapid appreciation of the yuan to reduce the trade deficit with China.

1.4 But the Chinese government has argued that the build-up of foreign exchange reserves has had no impact on its gradualist approach to currency reform due to huge employment pressures and its fragile financial system. In a speech to foreign business executives, Zhou Xiaochuan, president of the central People’s Bank of China, rejected U.S. pressure for a rapid appreciation of the yuan to reduce its trade deficit. He said it would make little difference unless Washington also made significant structural adjustments.

1.5 As a transitional economy, China’s accumulation of foreign exchange reserves was beneficial during the economic reform process, benefiting foreign trade and investment. However, the recent rapid growth has tended to worsen the imbalance in its balance of payments and created risks to its financial system.

1.6 The Chinese government has now started to consider whether its foreign exchange reserves are excessive and what measures it should take to address the issue.

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Although the government estimates that it will take two to three years for China to achieve a basic balance in international trade, taking effective measures to address the issue has become a priority.

1.7 China unpegged its currency from the dollar in July 2005 and revalued it by 2.1 per cent. Since then the yuan was allowed to rise by about another 1 per cent. Because Chinese companies have coped well with changes in the exchange rate regime, the government is confident about allowing market forces to play a greater role in setting the exchange rate. This has become a signal for further reform in its exchange rate regime. Due to China’s recent rapid accumulation of foreign exchange reserves, it is likely that any further changes in its exchange rate regime will be combined with measures to reduce its foreign exchange reserves.

**The Accumulation of China’s Foreign Exchange Reserves: a Review**

2.1 How has China accumulated such vast foreign exchange reserves? The answer is closely related to the country’s economic development since it launched its reform and opening-up policy in late 1978.

2.2 China has accumulated its foreign exchange reserves in five main phases since the 1978 economic reforms. Figures 1 and 2 show the dynamic path of the accumulation over the period 1977-2005.  

Figure 1: China’s Foreign Exchange Reserves 1977-2005

![Graph showing foreign exchange reserves from 1977 to 2005.](image)

Note: Data are yearly and compiled from China State Administration of Foreign Exchange.

2.3 The first phase (1978-1988) was a period of steady and slow accumulation, reflecting initial steps of economic growth under new policy incentives. When the reforms

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began, China’s foreign exchange reserves were minimal but sufficient to cover the requirements of a country with a very low import bill. In the early 1980s, export growth contributed to an initial rise in reserves to a peak of $17.4bn in 1984. But high trade deficits in 1985 and 1986 eroded the reserves in those years. In 1987 the surplus on trade in services slightly exceeded the merchandise trade deficit, producing a small current account surplus, and a comfortable net capital inflow helped push up reserves to $16.3bn. The reserves were held above this level for a further two years.

2.4 The second phase (1989-1991) was a period of moderate accumulation, associated with an economic slowdown under unfavourable external circumstances. In 1989, the year of the government’s crackdown on the pro-democracy movement, the economic slowdown produced a sharp fall in imports, and exports falling below imports, producing a trade deficit of $6.6bn. Between 1990 and 1991 a huge cutback in government spending and import bans helped to slash overall imports, but exports began to rise, which pushed the current account balance back into surplus for these two years and resulted in the accumulation of foreign exchange reserves.

2.5 The third phase (1992-1996) was marked by steady and rapid accumulation, associated with the economic takeoff in 1992 and soft landing in 1996. In early 1992, the late Deng Xiaoping called for rapid economic reform during his “southern tour.” The Chinese government implemented many new reform initiatives. Imports began to rise faster than exports due to increasing economic growth, and consequently foreign exchange reserves were gradually eroded. In 1993 the trade and current accounts were in deficit. Nonetheless, accelerating foreign direct investment (FDI)
flows compensated for the current account deficit and kept foreign exchange reserves rising. The current account remained in surplus and foreign exchange reserves continued to grow fast for most of the rest of the period.

2.6 The fourth phase (1997-1999) was a period of stagnating accumulation\(^3\) associated with economic recovery after the 1997 East Asian crisis. Trade surpluses and inward FDI flows remained stable for three continuous years, which led foreign exchange reserves to stay at a high but static level of about $145bn.

2.7 During the fifth phase (2000-05), foreign exchange reserves soared\(^4\), reflecting continuous high economic growth. In 2001, China joined the World Trade Organization (WTO). While WTO membership contributed to a rapid growth in imports, which eroded part of the trade surpluses, increasing FDI helped push up foreign exchange reserves. In 2002-2003, FDI inflows exceeded $50bn a year. From 2003 onwards the market expected the Chinese currency to be revalued. With increasing pressure for its appreciation, rapid and huge speculative capital inflows pushed its reserves to a record level. During 2004 and 2005, foreign exchange reserves accumulated at a rate of about $200bn a year and reached a record $818.9bn at the end of 2005.

2.8 Underlying the trends in China’s foreign exchange reserves accumulation were its economic development strategies during the period, which were strongly export-oriented. Policy-led exports and inward FDI flows were mainly responsible for a huge accumulation of reserves before 2003, and the accumulation was strengthened by China’s foreign exchange rate regime\(^5\). Since 2003 until the present, external pressure on the Chinese currency’s appreciation induced huge speculative capital inflows, which helped push up foreign exchange reserves to record levels. This was intensified by increasing liberalization in the capital account and crawling up managed bands for the RMB’s foreign exchange transactions\(^6\).

2.9 Are foreign exchange reserves of $818.8bn excessive? Since China is a transitional economy and its financial system is fragile, the issue is very complicated and has been a topic of intense debate both inside and outside China.

China’s Dilemmas

3.1 China’s spectacular economic development has presented China with a dilemma. Export-oriented development aimed at accumulating foreign exchange reserves could earn credibility and maintain stability of the Chinese currency. But the accumulation of huge reserves has created pressure for the yuan to appreciate, and

\(^3\) Net accumulation in China’s foreign exchange reserves declined over the period. See Figure 2.

\(^4\) Net accumulation in China’s foreign exchange reserves was growing rapidly over the period. See Figure 2.

\(^5\) Chinese companies were required to report foreign exchange income to the authorities and could only retain a small proportion for payments of foreign bills and debts. In particular during the period 1994 to 2004, China’s de facto fixed exchange rate regime facilitated its reserves accumulation.

\(^6\) The so-called managed floating regime has increasingly become an upwardly correcting managed float.
...its further appreciation would result in financial losses and instability of the currency. So the issue is whether its foreign exchange reserves are excessive. If this is the case, it would be reasonable to reduce them until an optimal level is reached.

3.2 Yang Li, director of the Institute of Finance in the Chinese Academy of Social Sciences (CASS), has argued that China’s foreign exchange reserves are not excessive because it needs sufficient reserves to maintain the stability of the yuan and maintain the confidence of international investors. He also argued that China’s foreign exchange reserves have been rewarded by sufficient return. 

3.3 Jeffrey Fankel has emphasized the opportunity cost of huge foreign exchange reserves and argued that China was presumably paying foreign investors on their inward investment a higher return than it was earning from its investment in foreign exchange reserves.

3.4 Bin Xia, director of the Institute of Finance in the Development Research Centre of the State Council of China, has estimated that about 22 per cent of foreign exchange reserves accumulated in 2005 were induced by expectations of the Chinese currency’s appreciation, mostly in terms of short-term capital inflows. He said $700bn in foreign exchange reserves should be sufficient.

3.5 What do China’s huge foreign exchange reserves imply? In 2005, China accumulated $209bn in foreign exchange, of which $102bn came from the trade surplus and over $60.3bn from inward FDI flows. The remaining approximately $45bn were seen as mostly speculative capital inflows (“hot money”) and some sneaked in under the guise of current accounts.

3.6 China’s growing foreign exchange reserves do not imply wealth that is disposable at any time, but rather a sizeable indirect debt. In 2005, only half of China’s accumulated foreign exchange reserves was consistent with its wealth, which allowed Beijing to fulfil international payment obligations. The remaining capital inflows (FDI and short-term capital inflows) could be interpreted as implied debts (long-run and short-term foreign borrowings) that China would have to pay back eventually. In particular, the 22% short-term capital inflows could easily reverse. Asian and Latin American experiences show that financial crises have often been triggered by such hot money flows.

3.7 But if they are excessive, what level of foreign exchange reserves is in China’s best interests? This depends on several key factors shaping the demand for foreign exchange, given that the supply is infinitely elastic.

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8 Jeffrey Fankel, "On the Renminbi: The Choice between Adjustment under a Fixed Exchange Rate and Adjustment under a Flexible Rate", a paper presented in a seminar on China’s Exchange Rate System, Dalian, China, 26-27 May 2004.
3.8 The foreign exchange reserves of a country like China with a managed floating exchange rate regime are mainly used to pay off import bills and foreign debts, maintaining the bands within which the currency floats and investing in foreign assets.

Paying off Import Bills and Foreign Debts

3.9 As a rule of thumb, the amount of foreign exchange reserves for a country should cover one-quarter of its imports\(^\text{10}\). In addition, some are required to pay off its foreign debts. Figure 3 shows that the cost of China’s imports in one quarter was on average $150bn in 2005. Figure 4 suggests a level of around $200bn for China’s gross net foreign debts in 2005. Paying off imports bills and foreign debts demanded $350bn in foreign exchange reserves as a minimum in 2005. But China’s foreign exchange reserves accumulated at a rate of about $200bn a year in 2004-2005 and reached $818.9bn in 2005, which was far beyond the minimum requirement.

Figure 3: China’s Imports 1998-2004

![Chart showing China's imports from 1998 to 2004.](chart.png)

Note: Data are obtained from IFS Yearbook 2005 (IMF publication); imports include goods and services.

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\(^{10}\) The figure is an average estimate, based on data (IFS 2004) about the ratio of foreign exchange reserves to (monthly) imports for OECD economies 1945-2000. On average, the ratio is around 3. This suggests a basic level of reserves for three-month imports in a country. There are also details in the paper "Demand for Reserves under International Capital Mobility" by Pablo Garcia, Central Bank of Chile Working Papers No. 58, December 1999.
Figure 4: China’s Net Foreign Debts 1998-2003


Maintaining the Bands for RMB Floats

3.10 China adopted a managed floating exchange rate regime based on a basket of currencies in July 2005 and the daily trading price of the U.S. dollar against the RMB in the inter-bank foreign exchange market was allowed to float within a band of ±0.3 per cent around the central parity published by the central bank. Under this arrangement, foreign exchange reserves are required to maintain the bands. The recent widespread expectation of an RMB appreciation has induced continuous short-term capital inflows and the central bank has to buy in excess foreign exchange in order to maintain the bands. In 2005, the amount required for maintaining the bands should at least cover the $45bn short-term capital inflows.

3.11 As a result, domestic money supply has to increase with pressure on domestic inflation and the central bank has to sell government bonds and bills to sterilize the capital inflows. Some experts have argued that it will become very difficult for China to continue the sterilization, since it will risk facing an excessively high ratio of government debts to domestic income. But Figure 5 indicates that the ratios have been below 6% since 1999. The continuous rapid economic growth over the period cushioned the issuance of government debts. However, if traditional barriers to capital flows are gradually eroded over time, the sterilization will not be feasible. This has further implications for a lower level of foreign exchange reserves and could imply reducing reserves gradually.
Figure 5: China’s Government Debts 1985-2003

Note:
1. The figure is configured in terms of the ratio of government debt to gross national income (GNI) and the government debt includes domestic and foreign debts.

Investing in Foreign Assets for Profits

3.12 China’s foreign reserves are typically held in the form of U.S. Treasury bills and bonds and other U.S. dollar securities. The U.S. Treasury estimates that around two-thirds of China’s foreign exchange reserves are held in dollar assets.\(^{11}\) The return on these securities is estimated at 4%.\(^{12}\) However, China is expected to pay a rate of return of about 15% to inward foreign investment.\(^{13}\) Therefore, China is presumably paying foreign investors on their inward investment, part of which is financed by China’s lending in the form of foreign reserves assets, a higher return than it earns from its investment by reserves assets. Such an institutional arrangement makes China lose money in the aggregate. Huge foreign exchange reserves have incurred large opportunity costs. In light of large U.S. trade deficits, the dollar is expected to depreciate over the medium-to-long term, and this will reduce further the return on holding dollar securities. All these suggest a lower level of foreign exchange reserves for China.

\(^{11}\) See "Report to Congress on International Economic and Exchange Rate Policies" in May 2006.
\(^{12}\) Most of China’s foreign exchange reserves were held in the U.S. securities (long-term) that were normally rewarded at a fixed rate of 4%.
\(^{13}\) Chen Yulu, “Asia is a real bank of the U.S.”, 21st Century Business Herald, 28 March 2006. Chen is vice-president of Chinese Renmin University.
3.13 All the three factors determined foreign exchange reserves of around $400bn for China in the demand in 2005. But this amount was demanded under the circumstance of capital control. Once China lifts its control on capital flows, speculative capital inflows could easily increase sharply, rather than by only $45bn.

3.14 The scarring experience of the 1997 East Asian crisis signalled that China has to accumulate enough foreign reserves to maintain the bands of its currency in the case of speculative financial attacks. Therefore, China should neither reduce nor accumulate foreign exchange reserves excessively but have the aim of maximizing net benefits for China as a whole.

**China’s Future Policy Options**

4.1 As a large transitional economy, China is in a stage of rapid economic development and restructuring. Large foreign exchange reserves help maintain the credibility of both the country and its currency, expand international trade, attract overseas investment, lower the cost of financing its institutions in their efforts to enter the international market, enhance China’s overseas financing capacity and uphold steady growth as the country develops.

4.2 However, recent heavy foreign exchange accumulation including rapidly increased speculative capital flows have increased the risk to the financial system, exacerbated inflationary pressure, incurred huge opportunity costs, resulted in large wealth losses with a weakening dollar, intensified pressure for RMB appreciation and increased the complexity of macroeconomic adjustment and foreign exchange reserve management.

4.3 Which policies should the Chinese government adopt to deal with these problems? Four main options are available, including spending and investing foreign exchange reserves, liberalization of the capital account, diversification of foreign exchange reserves and a switch in holders of foreign exchange reserves.

4.4 Chinese economists have suggested that its huge foreign exchange reserves could be used to import petroleum and other essential raw materials, as well as high technology and to invest in key sectors abroad.\(^{14}\) Since foreign exchange reserves can be regarded as indirect debts of the government against companies and individuals,\(^ {15}\) spending and investing foreign exchange reserves would create liquidity risks and mismatch problems in the duration of assets. If decisions on


\(^{15}\) The Chinese government had to sterilize capital inflows to reduce pressure for domestic inflation by issuing government bonds and bills.
expenditure and investment are carefully considered based on assets risks, this policy option should be feasible.

4.5 Liberalization in the capital account combined with strict control on hot money inflows\textsuperscript{16} allows efficient capital inflows and reasonable capital outflows. This option involves two potential problems, however. One is the difficulty of identifying hot money inflows because an essential proportion of the hot money comes into China under the guise of current accounts, and normal short-term inflows are also difficult to distinguish from hot money inflows. Another is that RMB appreciation and net capital inflows could easily reverse if the government lifts control on capital outflows immediately. If this were to happen, accumulated foreign exchange reserves would still not be sufficient to satisfy the extremely high demand for foreign exchange\textsuperscript{17} and this could lead to a financial crisis. Reasonable demands for foreign exchange should be encouraged, but capital outflows still need to be monitored before the government lifts controls.

4.6 Diversification of foreign exchange reserves\textsuperscript{18} would allow China to diversify its foreign exchange reserves out of dollar securities and switch into European and Asian bonds, given concerns over a weakening U.S. currency. But the most immediate function of foreign exchange reserves is international payment. The dollar is the main currency for China for international transactions since the U.S. is one of its biggest trading partners and most Asian nations use the dollar for international payments. In addition, the liquidity of the currency is a key factor for the central bank to make a decision to hold a portfolio of foreign exchange reserves. There could be a strong incentive for the central bank to maintain a large portion of its reserves in the world’s most liquid currency, the dollar. Therefore, large-scale diversification of China’s foreign exchange reserves out of the dollar would not be beneficial, and gradual, small-scale diversification would be preferable.

4.7 Foreign exchange held by the government can be switched to reserves held by companies and individuals.\textsuperscript{19} Compared to Western countries, companies and individuals in China are only allowed to hold an extremely limited amount of foreign exchange. This is one of the main reasons why the government has accumulated such huge reserves. If companies and individuals are allowed to hold more foreign exchange, the pressure the government faces could be reduced. But this option implies that companies and individuals will have to shoulder risks of foreign exchange fluctuation that the government currently bears. It would require the government to build efficient financial markets and provide enough financial securities and derivatives, which would allow them to avoid foreign exchange risks. This is consistent with liberalization of the capital account, but pushes it further. The

\textsuperscript{16} People Net, "Xiao Zhuoji’s Views on China’s Rapid Accumulated Foreign Exchange Reserves", 6 March 2006. Xiao Zhuoji, Economist and Member of Standing Committee in Chinese People’s Political Consultative Conference.

\textsuperscript{17} The global speculative capital flows were expected to easily exceed $1 trillion.


\textsuperscript{19} People Net, "China’s Foreign Exchange Reserves Reach $853.7bn and Surpass Japan’s", 28 March 2006.
option would work together with gradual liberalization in the capital account and becomes a medium-term choice.

**Challenges Continue**

5.1 China’s steady accumulation of foreign exchange reserves was beneficial over the past two decades, but the recent rapid build-up has brought about implied risks and problems for the Chinese economy. In particular, rapid and huge speculative capital inflows have contributed to a huge rise in its reserves and increased risks to the financial system.

5.2 China’s accumulated huge foreign exchange reserves in 2005 far exceeded normal needs. With strict controls on capital flows, it is safe and necessary for the government to reduce its foreign exchange reserves gradually and carefully.

5.3 The spending and investing of foreign exchange reserves should be undertaken in combination with liberalization in the capital account, given careful consideration of assets’ duration match and risk problems. Liberalization should be extended further but gradually in order to allow companies and individuals to adjust to changes in financial markets and to manage a portfolio to avoid financial risks.

5.4 During the first two months of 2006 the continued rapid build-up of foreign exchange reserves suggests that speculative inflows, although they have abated somewhat, are still strong. The increase in the first two months of the year of about $35bn is partially accounted for by the trade surplus of $12bn and another $5bn surplus in foreign investment, with the remainder consisting largely of speculative inflows.20 As foreign exchange reserves continue to increase, the government must beware of speculative capital inflows and encourage reasonable outflows in the near future.

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