Speculations are rife as to the revaluation of China’s currency. For many, China’s massive accumulation of international reserves over the last two years is proof in and of itself that its currency is undervalued. The more industrialized nations are thus putting increasing pressure on the Chinese government to revaluate the renminbi¹. Of course, it is in China’s best interests to acquire more exchange-rate flexibility in the long term, and not just for political reasons. But when will it take this critical step? With the American dollar relatively stable, the time seems right, but the Chinese government will certainly not want to let go of the most powerful weapon in its trade arsenal, a weak yuan. This Economic Viewpoint, the second in our series on China², focuses in greater detail on the issues surrounding the probable revaluation of the renminbi.

Capital mobility and the “trilemma” of open economies

In an effort to keep inflation under control and for fear the floating exchange rate will be subject to too much volatility (because the currency market in the country is relatively narrow), China, like many other emerging economies, wants a stable currency. The Chinese government keeps a tight rein on its currency and claims to be using a managed floating exchange rate, but the margin of fluctuation is so small (±0.3%) that we can in fact refer to a fixed exchange rate system. Since 1997, the Chinese currency—the renminbi (RMB)—has been pegged to the American dollar at a rate of 8.28 yuan to one US dollar.

To understand the macroeconomic implications underlying such a decision, we need to explain the trilemma facing open economies. This trilemma is constituted by the interaction between exchange rate stability, the free flow of capital and independent monetary policy. The constraints dictated by economic theory stipulate that these three things cannot be achieved simultaneously. To maintain a stable exchange rate, we must either abandon monetary autonomy or restrict capital flow. As shown in the illustration below, this means we are positioned on one side of the triangle. Canada, for example, with a fully liberalized capital account and independent monetary policy, has no choice but to allow the Canadian dollar to float.

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¹ China’s best interests
² Focuses on the issues surrounding the probable revaluation of the renminbi.
Progressive liberalization of the capital account

In accordance with the trilemma, China has long controlled the flow of capital to keep its exchange rate stable and give its monetary policy some autonomy. For the last few years, however, China has eased restrictions on capital inflows substantially and plans to further ease restrictions on outflows in the years to come. For the time being, this progressive liberalization of the capital account does not threaten the stability of the local currency, as long as the RMB is not totally convertible. However, it renders monetary policy ineffective (we will see why in the following chapters).

China’s companies and commercial banks now have the right to hold foreign currency to facilitate international trade, but most of the foreign capital entering China as private direct and portfolio investment is deposited in State banks. The latter then exchange it at the People’s Bank of China (PBoC)—the central bank—at the fixed rate of 8.28 yuan/US$.

As a counterpart, since China has surpluses in its current and capital accounts (see the table on page 5 for further details), this means that it must accumulate foreign reserves to offset the imbalance in the balance of payments:

\[
\text{Balance of payments} = \text{current account balance} + \text{capital account balance} - \text{reserves} = 0
\]

Reserves provide stability but create inflationary pressure

With accelerating private foreign investment and the speculative movement associated with a probable RMB revaluation, foreign currency reserves have quadrupled since the start of the millennium, going from US$165.6B in December 2000 to US$659.9B in March 2005.

The problem is that the accumulation of reserves is putting pressure on the money supply and, by implication, inflation. This stems from the fact that, to buy the currencies entering the country, the PBoC must print money, substantially increasing the number of RMB in circulation—a key factor in the monetary base:

\[
\text{Monetary base} = \text{money in circulation} + \text{sight deposits} = \text{net domestic assets} + \text{international reserves}
\]

For now, restrictions on credit have helped slow down growth in the largest money stock, M2, from a peak of more than 20% in August of 2003 to an average of 14.1% since the October 2004 low. However, the contribution by international reserves to money supply growth has gone from less than 1% in January 2001 to almost 10% at the end of 2004. It is thus hard to control the money supply in the longer term.

Due to the accumulation of international reserves, China’s money supply is hard to control in the long term

Sources: National Bureau of Statistics of China and Desjardins, Economic Studies

Capital account liberalization makes monetary policy inefficient

Chinese monetary authorities are succeeding in partly absorbing the increase in circulating liquidity by sterilizing international reserve purchases by issuing bonds (see box 1 on page 4 for further details on sterilization). But, at the speed at which China is amassing currencies (reserves have increased 50% since March 2004), the pressure on the money supply can only increase.

At this time, the net cost of the sterilization policy is quite low, even negative. But, in the long term, it is hard to believe China can keep on amassing international reserves at no cost. Since the country’s bond market is not very developed, sooner or later, the sale of bonds will drive interest rates up, which will further encourage the inflow of foreign capital, creating a vicious circle. China ardently wants the opposite.
As we explained earlier, the more capital comes into China, the more the PBoC has to increase reserves, and the more the pressure on the money supply increases. If the funds held by the PBoC are greater than the minimum required level, the State’s banks can use the surplus funds to increase lending. This encourages investment, leads to excess production capacity and may drive a number of economic sectors to overheating, which could then result in plant closures and lead to heavy layoffs. This would be particularly bad for the banking sector, which is already grappling with a very high number of non-performing loans. Thus, it seems that as long as China accumulates international reserves, using interest rate variation as a tool of monetary policy will be ineffective. Ultimately, pegging the RMB to the greenback thus seems work against the objective of maintaining price stability in China.

**Seeking greater flexibility**

As it picks up the pace on integration with the world economy, China is increasingly subject to external shocks, and the need for greater monetary autonomy is imperative, even urgent. There is no doubt that the least costly solution would be greater flexibility on the exchange rate. Here, the government admits that it wants total convertibility for the RMB. But a more flexible exchange rate must be achieved through a stronger financial and banking system and a full liberalization of the capital account. According to Chinese government authorities, liberalizing the capital account, particularly capital outflows, will help relieve some pressure on local currency and create a more favourable context for its eventual revaluation.

However, an International Monetary Fund (IMF) study states that the Chinese government is putting the cart before the horse⁶. Like India, China would be smart to gain more flexibility for its exchange rate before it liberalizes its capital account. There are many studies demonstrating the benefits to an emerging economy of controlling capital flow⁴. This is what allowed China to avoid the negative consequences of contagion during the Asian crisis of 1997 and 1998⁸. The IMF maintains that removing restrictions on capital outflows can only encourage the inflow of direct private investment⁹. Without exchange rate flexibility, China would be obliged to accumulate international reserves, once again working against the initial objective: price stability. This does not mean that China will adopt a floating exchange rate immediately, but it should slowly head toward greater flexibility.

**Most likely options in the short term**

To achieve this, China has several avenues open to it, e.g. a simple revaluation, repegging against a basket of currencies (with or without revaluation), wider fluctuation bands, or a freefloating renminbi. Judging by the low fluctuation on non-deliverable one-year forwards on the RMB, the international community is expecting the Chinese government to implement reforms slowly. At the start of May 2005, forwards were indicating a 60% probability of a 10% revaluation of the RMB against the American dollar in the near term.

**Speculations are rife as to the re-evaluation of China’s currency**

For now, the option referred to the most often suggests that the RMB’s revaluation will go hand in hand with repegging to a basket of China’s main trading partners’ currencies, including the yen, the euro, the US dollar and the Australian dollar. This would have the advantage of stabilizing the RMB against currencies other than the greenback. Note that, as the RMB is pegged exclusively to the American dollar, China’s currency has tended to depreciate in conjunction with the greenback against major currencies since the start of 2002 (see the graph at the top of page 5). This situation, which makes Chinese
exports more competitive with respect to most industrialized nations and allows China to seize a greater share of world trade, is irritating the United States, the euro zone and Japan, which are maintaining that, by keeping its currency weak, China is not playing by the rules. The greenback has stabilized recently due to the surge by American federal funds, but the size of the US current account deficit—over 6% of the GDP—suggests that the currency’s trend will remain downward overall for the quarters, even years, to come. And this will only heighten the pressure to revaluate the RMB.

That said, it is not clear that a modest revaluation will cure all ills. Studies\textsuperscript{15} show that a more substantial RMB revaluation—between 15% and 30%—is needed to rebalance the balance of payments, that is, the situation

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**Box 1.**

**Sterilization interventions on the exchange market**

The purchase of international reserves increases the liquidity available to an economy. The increased liquidity, which puts downward pressure on interest rates, can cause the economy to overheat, leading to rising inflationary pressures. To wipe out the effect of foreign currency interventions on the domestic money supply, central banks sometimes perform reverse operations on the foreign and domestic exchange markets. This type of policy consists of a sterilization intervention on the exchange market.

Usually, a central bank conducts sterilization policy by selling the domestic government securities it owns or by issuing locally-denominated securities under its own name (central bank securities). This mops up the liquidity that purchases of international reserves have injected into the economy, leaving the monetary base unchanged.

Table 1 shows a simple example of the changes that a sterilization policy causes for a central bank’s balance sheet. As we can see, a policy of unsterilized foreign currency purchases (for example, US$1000 in US Treasury bills) would increase the money supply by that amount. To mop up the increase in circulating liquidity, the central bank can opt for a sterilization policy by issuing a bond of an equal value on the domestic market, mainly to commercial banks. The opposite phenomenon can also be seen.

<table>
<thead>
<tr>
<th>Central bank moves</th>
<th>Effects on domestic money supply</th>
<th>Effects on domestic assets of the central bank</th>
<th>Effects on foreign assets of the central bank</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Purchases of reserves</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unsterilized</td>
<td>$1 000</td>
<td>$0</td>
<td>$1 000</td>
</tr>
<tr>
<td>Sterilized</td>
<td>$0</td>
<td>-$1 000</td>
<td>$1 000</td>
</tr>
<tr>
<td><strong>Sales of reserves</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unsterilized</td>
<td>-$1 000</td>
<td>$0</td>
<td>-$1 000</td>
</tr>
<tr>
<td>Sterilized</td>
<td>$0</td>
<td>$1 000</td>
<td>-$1 000</td>
</tr>
</tbody>
</table>

In principle, there is no set limit for sterilizing international reserve purchases, since a central bank’s net domestic assets can be negative. However, sterilization is not cost-free. In most cases, the policy means that the central bank is buying foreign securities with a fairly low yield while issuing local debt securities at a relatively high yield. Since authorities often have no other choice than to increase interest rates to get local investors to continue adding central bank securities to their portfolios, the costs associated with sterilization tend to rise as reserves continue to accumulate.

Sources: New York Federal Reserve and Desjardins, Economic Studies
in which the capital account balance offsets the current account balance so as to keep international reserves stable. In this context, it is likely that a modest revaluation will be seen as the forerunner for further adjustments in the quarters to come, which will just encourage speculation on the RMB and, concomitantly, stimulate the inflow of private capital.

Here, note that the accumulation of reserves in the last few years is not simply a result of increased exports and direct foreign investment. In part, it also reflects the inflow of “hot money”, i.e. the speculative flows associated with a probable revaluation of the RMB. In 2004, over US$50B out of a total accumulation of US$207B in reserves was not accounted for in the capital account. But since we cannot know exactly what direction the hot money flows will take as restrictions on capital outflows are eased, this leaves room for doubt about the net undervaluation of China’s currency. It would therefore be advisable for the RMB’s revaluation to be done in conjunction with widening the fluctuation bands to ±5 to 7%, to make sure China’s currency does not become overvalued from one day to the next.

**Timing of revaluation**

If revaluation is almost certain, then the question—probably the most important question for financial markets—to ask now is: when? In principle, moving from a fixed exchange rate system toward greater flexibility is more likely to be successful during times when there is little volatility on the exchange markets. In the last few years, markets have been subject to excess volatility for many reasons, but the recent stabilization of the US dollar, brought on by the US Federal Reserve’s tightening of monetary policy, seems like a good opportunity to revaluate the RMB.

Yet, in the past, the Chinese government has repeatedly stated that it did not want to act hastily. One thing is certain: China will revaluate its currency only when it deems it is in its own best interests to do so. It therefore seems that the rush to revaluation is “made in the USA.” For the Americans, among other partisans of immediate revaluation, China is ready. At the last G7 summit, US Treasury Secretary John Snow said:

“China has taken numerous steps over the last few years, including preparing for greater flexibility in their exchange rate, introducing foreign exchange market financial products, and strengthening banks and bank supervision. With this groundwork in place, China is ready now to adopt a more flexible exchange rate.”

In May, the tone was raised a notch in the Report to Congress on International Economic and Exchange Rate Policies:

“China has completed significant preparations over the last two years for adoption of a more flexible, market-oriented exchange rate. China is now ready to move to a more flexible exchange rate and should move now.”

In spite of the more aggressive tone, the US Treasury report does not go so far as to accuse China of manipulating its exchange rate, but it does give it six months to adjust the RMB’s peg to the greenback.

Recently, the United States has even gone so far as to threaten to impose a tariff of 27.5% on imports from China if the reforms are not completed soon. That said, although Beijing acknowledges that international pressure is speeding up reform, no formal commitment has been made. Internal pressure is rather weak at the moment. Inflation is contained and should not accelerate too much.
in the months to come. In the long term, amassing foreign currencies is certainly an inflation risk, but for the time being, it is more of a safety net for completing economic reforms. To create enough employment and maintain social order, economic growth must remain steady. Yet, since China has implemented restrictions to curb investment growth in overheating sectors, the economy’s evolution is, more than ever, oriented toward international trade. As a result, it is quite unlikely China will want to let go of its most powerful trade tool—a weak currency—quickly.

**Conclusion**

Technically, China says it is ready to move to more currency flexibility. While the current excitement about the probable revaluation of the currency signals that China will proceed to readjust the RMB sooner rather than later, it is still hard to know exactly when. The Chinese government is avoiding any reference to a timeline for implementing the reforms.

For now, Chinese authorities are continuing to state that a major revaluation would be bad for China and its neighbours, perhaps because this is what it believes, perhaps to limit speculative movement on the currency, and perhaps to maintain its independence. The Americans are claiming the contrary. According to the US, keeping the exchange rate fixed longer can only substantially increase the distortion in world markets, block price adjustment mechanisms, and hinder the processes for correcting international imbalances.

In a later study, the last in our special series on China, we will take a closer look at the potential impact of re-evaluating the RMB on the country’s growth, and the likelihood it will correct the US trade imbalance. In the near future, it appears unlikely that an RMB appreciation will be as catastrophic for net Chinese exports as some suggest, since exports have substantial imported content (almost 40%). However, China will no doubt want to avoid any potential distortions in the short term, as fear of an emergence of social tensions remains a significant concern for the Chinese government.

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1 The currency is called the renminbi (RMB); literally, “ren min bi” means “the money of the people”. The yuan is the accounting unit.  
3 At the end of 2004, almost 85% of the foreign currency assets were held by the PBoC.  
4 Net domestic assets = domestic assets – foreign assets.  
5 Interest rates paid on local loans are below the interest earned on the foreign securities it holds.  
8 During the Asian crisis, one phenomenon noted was that some emerging nations with liberalized capital accounts were hurt by investor anxiety about Thailand’s troubles and saw an abrupt turnaround in their capital flows, which drove the value of their currencies down sharply.  
9 Knowing that there is no bar to taking their investment out of the country, international investors may be encouraged to invest more.  
11 For instance, the uncertainty about the global economy following the terrorist attacks in the United States, the financial scandals, rising oil prices and, perhaps even more importantly, the macroeconomic imbalances which have brought the US current account deficit to over 6% of the GDP.