The Vanishing of China’s Twin Surpluses and its Policy Implications

Ming Zhang, Xiaofen Tan*

Abstract

This paper argues that the twin surpluses in China’s balance of payments will disappear in the future as a result of external and internal structural changes. China’s current account surplus will diminish as a result of the decline in the goods trade surplus, the expanding service trade deficit and negative investment income. China’s capital account might shift from surplus to deficit as a result of shrinking net direct investment inflows and more volatile short-term capital flows. When the twin surpluses no longer exist, the normalization of the US treasury bond yields will be sped up, terminating the one-way appreciation of the RMB exchange rate; the People’s Bank of China’s pressure to sterilize inflows will be alleviated, and new problems for the People’s Bank of China’s monetary operation will emerge; new financial vulnerabilities for the Chinese economy will arise. Finally, the present paper provides some policy suggestions for the Chinese Government to deal with the declining twin surpluses.

Key words: China, capital account liberalization, financial risk, twin surpluses

JEL codes: F21, F31, F32

I. Introduction

China experienced both current account and capital account surpluses in its balance of payments...
payments for 13 consecutive years from 1999 to 2011 (Figure 1). As a result of these twin surpluses and the persistent intervention by the PBC in the foreign exchange market, China’s foreign exchange reserves increased from US$155bn at the end of 1999 to US$3.8tn at the end of 2013. The persistent twin surpluses were deemed a symptom of China’s external imbalance, which contributed significantly to the global current account imbalance in the 2000s. The sharp rise in foreign exchange reserves is regarded by foreign countries (especially the USA) as evidence of the PBC’s intervention in the foreign exchange market, which is commonly cited as an argument to increase pressure for RMB appreciation (Figure 2).

However, since the onset of the US subprime crisis and the European sovereign debt crisis, China’s twin surpluses have been subject to structural changes. First, the current account surplus peaked at US$421bn in 2008 (Figure 1) and the ratio of the current account surplus to GDP peaked at 10.1 percent in 2007 (Figure 3). After that, both the scale and the

![Figure 1. The Twin Surpluses of China’s Balance of Payments](image1)

Source: CEIC.

![Figure 2. The Accumulation of China’s Forex Reserve](image2)

Sources: CEIC and the author’s calculation.
Notes: BOP, balance of payments; PBC, People’s Bank of China.

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The Vanishing of China’s Twin Surpluses and its Policy Implications

The ratio of the current account surplus to GDP declined markedly. The ratio of the current account surplus to GDP was under 3 percent from 2011 to 2013, reflecting that China’s current account imbalance had clearly declined. Second, the relative importance of the capital account balance has been increasing. As can be seen from Figures 1 and 3, the current account balance was larger than the capital account balance from 2005 to 2009, but the capital account balance was larger than the current account balance from 2010 to 2013, except in 2012 (during the exacerbation of the European sovereign debt crisis). Third, following the global financial crisis, the volatility of the capital account balance has been much greater than that of the current account balance, and, hence, the extent of the annual growth of foreign exchange reserves has been less certain. For example, the annual increment of China’s foreign exchange reserves fell sharply, from US$334bn in 2011 to US$131bn in 2012, due to the transition from net capital inflows to net capital outflows, and rose dramatically, to US$510bn in 2013, as a result of another transition from net capital outflows to net capital inflows.

There are already some international studies discussing the rebalancing of the global and the Chinese economy. Most of the published studies focus on the evolution of domestic investment and the domestic savings of targeted countries, because they view the current account balance as corresponding to the gap between domestic investment and domestic saving. Thus, the rebalancing of the current account surplus or deficit equates to the rebalancing of the gap between domestic investment and domestic saving. Lane and Milesi-Ferretti (2014) point out that the majority of global external adjustment has taken the form of “expenditure reduction,” instead of “expenditure switching.” In other words, they conclude that the rebalancing of the world economy has been mainly due to cyclical, not structural reasons. According to Cheung et al. (2010), the medium-term evolution of global imbalances can be largely attributed to structural factors such as demographic changes, fiscal balances, financial market developments and institutional qualities. However, they also argue that
the correction of the global imbalance after the global financial crisis could partly be related to cyclical factors such as changes in output, oil prices and the exchange rate. Dadush (2011) suggests that the attention of major countries should not be focused on global rebalancing but more on domestic reforms, because an external imbalance is just a symptom of internal disorder.

Ahuja et al. (2012) argue that although China ’s current account surplus will likely remain below its pre-crisis level in the medium term, it was still too early to conclude that China ’s international payment has already been rebalanced, because the shrinking of the current account surplus was mainly a result of an unsustainable surge in domestic investment. In contrast, Huang and Zheng (2013) claim that the reason for the decline in China ’s current account surplus following the crisis was mainly structural, as the contribution of structural factors to the surge in gross investment was much larger than that of cyclical factors.

The present paper adopts a different perspective compared to the above studies when discussing the evolution of China ’s current account. Instead of examining the movements of the domestic investment rate and the saving rate, we analyze the evolution of specific components of China ’s current account as a result of environmental changes: the goods trade balance, the service trade balance and the net overseas investment income. We find that the shrinking of China ’s current account surplus is mainly a result of structural adjustments. In other words, even when the global economy rebounds to pre-crisis levels, China ’s current account surplus to GDP ratio will still be under 3–4 percent. The present paper also examines the evolution of China ’s capital account.

Although China experienced current account and capital account surpluses again in 2013, we argue that China ’s persistent twin surpluses will decline due to some important changes in both the current account and the capital account. These changes will be driven by domestic structural reforms and further opening up of China ’s service sector. Moreover, the disappearance of China ’s twin surpluses will have strong impacts on both the macroeconomy and financial markets in the world and China.

The present paper investigates the drivers of China ’s declining twin surpluses and the related policy implications. The rest of the paper is organized as follows. Section II focuses on the evolution of China ’s current account balance, Section III considers the evolution of China ’s capital account balance, Section IV discusses the policy implications of the end of the twin surpluses, and the final section concludes, providing some policy suggestions for the Chinese Government.

II. The Evolution of China’s Current Account Balance

As shown in Figure 3, the ratio of the current account surplus to GDP declined markedly...
after 2008, which indicates that China’s current account imbalance has already been significantly alleviated. However, whether the decline in the current account to GDP ratio was caused by cyclical factors or structural factors remains questionable. On the one hand, some economists have argued that the decline in China’s current account surplus from 2008 resulted from the surge in domestic investment after the onset of the global financial crisis, which shrank the saving investment gap and, therefore, pushed down the current account surplus (Cheung et al., 2010; Ahuja et al., 2012; Lane and Milesi-Ferretti, 2014). Along these lines of logic, China may face further rises in the current account surplus once the domestic investment level falls due to the exacerbation of excess capacity. On the other hand, if the shrinking of the current account to GDP ratio was caused by structural factors, China’s current account will be more balanced in the future (Huang and Zheng, 2013).

To consider this issue, we first decompose the current account into more specific items, and then analyze the driving factors and evolution of those items. Figure 4 demonstrates the four major components of China’s current account. First, the goods trade balance has been persistently positive and has always been a major contributor to China’s current account surplus. The goods trade balance rose sharply from 2005 to 2008, dropped significantly in 2009, and rose again from 2012. Second, the service trade balance has been persistently negative, and the service trade deficit has widened markedly since 2011. Third, the income balance has been negative for most of the period, except 2007 and 2008. Finally, the current transfer balance has been positive for most of the period, but it became negative in 2013. To predict the trajectory of China’s current account, we will analyze the evolution of goods trade, service trade and income, respectively.

Goods Trade Balance
The goods trade surplus has been the main component of China’s current account

Figure 4. The Breakdown of China’s Current Account

Source: CEIC.
surplus since the mid-1990s; thus, the evolution of the goods trade balance will have a
decisive impact on the evolution of China’s current account. Generally speaking, goods
exports depend on external demand and export prices, and goods imports depend on internal
demand and import prices. Moreover, the movement of the RMB exchange rate exerts a
great impact on both export and import prices. Therefore, to analyze the future direction of
China’s goods trade balance, we should consider the relative strength of external and
internal demand, the movement of the RMB exchange rate, and the export and import
elasticities for both demand and price. Moreover, because the current account balance is
also the gap between domestic investment and domestic savings, we will also analyze the
possible changes in China’s investment ratio and savings ratio.

Yao et al. (2010) estimate the demand function of China’s exports from 1992 to 2006,
and find the short-term income elasticity and price elasticity of China’s exports to be 2.34
and −0.65, respectively. Their research shows that the short-term income elasticity of China’s
exports was 3.6 times the short-term price elasticity from 1992 to 2006; therefore, external
demand is much more important than RMB appreciation in shaping China’s export growth.
Wang and Zhang (2014) estimate the demand function of China’s exports from July 2005 to
June 2012, and their results show that the income and price elasticity of China’s exports
reached 1.39 and −1.70, respectively. The estimation of the price elasticity of China’s exports
estimated by Wang and Zhang (2014) is significantly larger than that of Yao et al. (2010),
which could be partly attributed to the different methodologies applied. However, the
difference may also show that, along with the RMB appreciation, the rise in domestic labor
costs and the onset of the global financial crisis, the change in export prices exerts a much
heavier impact on export growth, even after controlling the change in external demand.

As show in Figure 5, there has been a significant negative correlation between China’s
goods export growth and the appreciation of the RMB’s real effective exchange rate. Figure 6

Figure 5. The RMB Real Effective Exchange Rate and China’s Export Growth

Sources: CEIC and the author’s calculation.
Notes: REER, real effective exchange rate; yoy, year-on-year.
The Vanishing of China’s Twin Surpluses and its Policy Implications

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Figure 6. The External Demand and China’s Export Growth

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The Vanishing of China’s Twin Surpluses and its Policy Implications

The Vanishing of China’s Twin Surpluses and its Policy Implications

demonstrates that there has been a significant positive correlation between China’s goods export growth and the external demand from advanced economies. These two relationships are in accord with the findings by Yao et al. (2010) and Wang and Zhang (2014).

China may continue to have a goods trade surplus in the future, but the goods trade surplus to GDP ratio will gradually decline. The major reasons are as follows. First, along with the further appreciation of the RMB’s real effective exchange rate and the liberalization of domestic factor prices, the prices of China’s goods exports will rise, which will hurt export competitiveness. Second, following the global financial crisis, the growth of the world economy will remain relatively weak for some time, which means that the external demand for China’s exports will remain subdued. Third, the relatively strong domestic economic growth, the further appreciation of the RMB’s effective exchange rate and the further opening up of the domestic market will lead to faster growth of goods imports. Fourth, along with China’s rapid industrialization and urbanization, the surge in Chinese

Our prediction is that the exchange rate of the RMB against the US dollar will remain relatively stable in 2015–2016. However, considering that the US dollar is appreciating against almost every major currency as a result of the tapering off from quantitative easing and the possible interest rate hikes in the future, the effective exchange rate of the RMB would continue to appreciate at least in 2015.

Of course, Chinese exporting enterprises have been trying to upgrade their technologies and final products. However, the speed of technology upgrading might lag behind the speed of domestic factor price liberalization, thus hurting the competitiveness of China’s exports.

We believe that the potential growth rate of the Chinese economy has already come down from 9–10 percent in the last decade to around 7 percent in the next decade. However, 7 percent is still very high if compared to the potential growth rates of either major advanced economies (2–3 percent) or other emerging economies (4–5 percent).

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demand for natural resources will result in an increasing trade deficit in primary products. Fifth, the rapidly aging population will inevitably cause China’s household savings ratio to fall. Finally, there are many long-term structural reforms under way, such as those addressing expanding government spending on medical care and pensions, rising minimum wages and building more affordable housing. These structural reforms would mitigate precautionary savings motives and, therefore, reduce the ratio of household savings to national income.

**Service Trade Balance**
China has been facing a persistent service trade deficit since 1995, which shows that although China enjoys a comparative advantage in its manufacturing sector, it suffers from a comparative disadvantage in its service sector. China’s service trade deficit has been expanding rapidly since the onset of the global financial crisis, increasing from US$7.9bn in 2007 to US$124.5bn in 2013.\(^5\) The sharp rise in China’s service trade deficit could be attributed to the significant appreciation of the RMB’s effective exchange rate, the surge in overseas travel and the accelerated opening of China’s service sector over the past decade.

Considering that many sub-sectors of China’s service sector are still monopolized by state-owned enterprises (SOEs), including education, medical care, telecommunication, rail transport and finance, and that it is economically and politically difficult to break the monopoly of SOEs and to really open up the service sector to domestic private enterprises, it would be a gradual process for the Chinese economy to improve the competitiveness of its service sector. However, it seems that the Chinese Government plans to further accelerate the opening up of its service sector, through the Shanghai Free Trade Zone and Qianhai Specialized Region experiments. If China’s service sector is more open without corresponding improvement in domestic competitiveness, China’s service trade deficit would remain and widen at least in the near future (i.e. over the next 5 years). After all, if domestic supply cannot meet demand, Chinese residents’ demand for better quality services (underpinned by a burgeoning middle class), from tourism to education, from health care to pension services, would be fulfilled through overseas suppliers.

**Investment Income**
By the end of 2013, China’s net international assets had reached over US$1.97tn. However, as a major international creditor, China has had continuous negative investment income over the past 20 years, except in 2007 and 2008. The explanation for this unusual phenomenon is that the investment returns for China’s overseas assets have been much lower than the returns for foreign countries’ assets in China. As shown in Figure 7, the

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\(^5\)The data come from the BOP data released by SAFE.

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yields of China’s overseas assets (the mean was 2.9 percent over the past decade) were significantly lower than those of China’s overseas liabilities (the mean was 5.8 percent in the past decade) during the period from 2004 to 2013. Xiao and Chen (2013) state that China’s valuation loss reached US$421bn from 2005 to 2011 because the yield of China’s overseas assets was persistently lower than that of overseas liabilities.

The investment yield gap between China’s overseas assets and overseas liabilities could be attributed to the different asset allocations of China’s outward investment and inward investment. As Figure 8 demonstrates, over the past decade, approximately 67 percent of China’s outward investment has been in reserve assets, which have been mainly low yield and high liquid assets such as US treasury bonds. In contrast, approximately 61 percent of China’s inward investment has been direct investment, which has been more risky but able to achieve much higher investment returns. Other than asset allocations, the experiences of investors could also explain part of the gap in investment yields. Without doubt, Chinese investors in the international financial market do not have as much experience as international investors, as a result of long-term financial repression and capital account regulation in China.

Considering that China’s overseas assets are mostly denominated in foreign currencies, and China’s overseas liabilities are mostly denominated in RMB, the appreciation of the RMB against foreign currencies will cause valuation loss for China’s net international assets. Deer and Song (2013) show that China’s accumulative net capital losses on its international balance sheet were US$134bn from 2005 to 2010.

Sources: CEIC and the author’s calculation.
Notes: To calculate the yields of China’s overseas assets, we use the credit side of investment income from China’s balance of payments (BOP) to divide overseas assets from China’s International Investment Position (IIP). To calculate the yields of China’s overseas liabilities, we use the debit side of investment income from China’s BOP divided by overseas liabilities from China’s IIP.
After the onset of the US subprime crisis, the Chinese Government began to promote outward direct investment to improve the investment yield for overseas assets in the future. However, the Chinese Government has also been expanding the quota for international investors’ investment in the domestic financial market. Considering the experience gap between domestic and international investors, we predict that in the future China’s overall investment income deficit will deteriorate first, then begin to improve gradually once Chinese investors become more experienced in the international financial market.

**Brief Summary**

To sum up, in the future, China’s goods trade surplus will likely shrink, the service trade deficit will increase and the investment income deficit will increase first before decreasing. China’s current account surplus to GDP ratio is likely to continue to shrink in the future, which means that China’s external imbalance will continue to increase. However, we cannot exclude the possibility that China’s current account surplus might become a deficit under extreme circumstances. For example, if the RMB exchange rate formation...
mechanism were to be fully liberalized, large capital inflows would push the RMB to appreciate sharply against the US dollar, which could result in a goods trade deficit and, therefore, a current account deficit. The experience of Brazil is a good lesson for China. As shown in Figure 9, although Brazil is a typical commodity-exporting country, it faces a persistent current account deficit. The reason is that the sum of the service trade deficit and the negative investment income is much larger than its goods trade surplus.

III. The Evolution of China’s Capital Account Balance

As can be seen from both Figures 1 and 3, the volatility of China’s capital account balance is much higher than that of the current account balance. To analyze the evolution of China’s capital account, we decompose the capital account into more specific items, and then analyze the evolution of each item. Figure 10 displays the three major components of China’s capital account. From Figure 10 we can see that direct investment flow is most stable, and other investment flow is most volatile. As Table 1 illustrates, direct investment flow is not only the major contributor of China’s capital account surplus but also the most stable type (the coefficient of deviation is only 166 percent); however, other investment flow is the major component of capital outflow and also the most volatile type (the coefficient of deviation reaches 734 percent). The average level of portfolio investment flow is the smallest, and its volatility is between that of direct investment flow and other investment flow.

**Direct Investment Flow**

As Figure 11 shows, although its outward direct investment has been growing fast since 2005, China is still a net importer of direct investment. However, the net direct investment inflow will decline further, and China might become a net exporter of direct
The major reasons are as follows. First, along with the liberalization of domestic factor (such as labor, land, resources and environment) prices and the appreciation of the RMB, the comparative advantage of China as a center for investment after 2014 or 2015. The major reasons are as follows. First, along with the liberalization of domestic factor (such as labor, land, resources and environment) prices and the appreciation of the RMB, the comparative advantage of China as a center for

### Table 1. The Descriptive Statistics about Capital Flows under China’s Capital Account

<table>
<thead>
<tr>
<th></th>
<th>Maximum (US$bn)</th>
<th>Minimum (US$bn)</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>Coefficient of deviation (100%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall balance</td>
<td>323 (2013)</td>
<td>36 (2012)</td>
<td>53</td>
<td>85</td>
<td>166%</td>
</tr>
<tr>
<td>Direct investment</td>
<td>232 (2011)</td>
<td>0 (1982)</td>
<td>57</td>
<td>65</td>
<td>114%</td>
</tr>
<tr>
<td>Other investment</td>
<td>80 (2009)</td>
<td>-260 (2012)</td>
<td>-8</td>
<td>58</td>
<td>734%</td>
</tr>
</tbody>
</table>

Sources: CEIC and the author’s calculation.

Notes: The numbers in parentheses indicate the year when the maximum or minimum value occurred.

### Figure 10. The Breakdown of China’s Capital Account

![Figure 10. The Breakdown of China’s Capital Account](image)

Source: CEIC.

### Figure 11. The Inward and Outward Direct Investment Flows of China

![Figure 11. The Inward and Outward Direct Investment Flows of China](image)

Sources: CEIC and the author’s calculation.

Note: We use the stock data from China’s IIP to calculate the flow data, which include the valuation effects.
processing trade is diminishing. Second, as the Chinese central and local governments have already begun to cut and even remove preferential policies for foreign enterprises, such as income tax reduction, low land prices and other fiscal subsidies, the incentive for domestic institutional arbitraging through the so called round-tripping foreign direct investment (FDI) has been declining. Third, Chinese enterprises, especially SOEs, have a strong need to secure the overseas supply of energy and commodities through international mergers and acquisitions. Fourth, Chinese enterprises, especially private enterprises, have strong dual incentives to increase the value-added of their products by obtaining advanced technologies and management expertise (Huang and Wang, 2011, 2013), and to circumvent trade protectionism by foreign countries through outward direct investment. Finally, to slow down the accumulation and to diversify the use of China’s foreign exchange reserves, the Chinese Government is actively encouraging domestic enterprises to invest abroad by granting them more foreign exchange loans directly through the State Administration of Foreign Exchange or indirectly through the Chinese Development Bank. Among the above reasons, the first and second reasons imply that the direct investment inflow will slow down, and the rest of the reasons indicate that the direct investment outflow will accelerate.

**Short-term Investment (Portfolio Investment plus Other Investment) Flow**

It is very difficult to predict the direction of short-term capital flows for China, because they are very volatile. However, if the net direct investment inflow continues to decline, it is very likely that the short-term capital flow will dominate the evolution of China’s capital account balance from now on. If this is the case, as shown in Table 1, the volatility of China’s capital account balance will increase significantly. When the Chinese economy behaves well and the global financial market is calm, China may face huge capital inflows, which often accompanies overheating of the economy and asset bubbles. However, when the Chinese economy is facing adjustment or an explicit crisis, or the global financial market is in turmoil, China might face huge capital outflows, which often results in various kinds of financial crisis, such as an asset bubble crash, domestic currency depreciation, an international payment crisis or a debt crisis.

Until now, China has not experienced a real financial crisis as a result of volatile international capital flows, thanks to capital account regulation. Although the cross-border arbitraging activities are arising, China’s capital account control, till now, is still effective (Ma and McCauley, 2008; Otani et al., 2011). However, the Chinese Government has already

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*Xiao (2004) estimates that China’s round tripping FDI to overall FDI ratio was around 40 percent in early 2000s, which is much higher than the previous estimations. However, after that, we could find no more influential research on this topic.
begun to accelerate the liberalization of its capital account, which will inevitably result in larger scale and more volatile short-term capital inflows or outflows. For example, the promotion of RMB internationalization has encouraged short-term exchange rate and interest rate arbitraging activities between the mainland onshore RMB market and Hong Kong’s offshore RMB market (Zhang and He, 2012).

He et al. (2012) predict that if the capital control is removed, although China’s gross international investment position would grow significantly, the capital inflows and outflows would become much more balanced. However, Bayoumi and Ohnsorge’s (2013) research shows that if China liberalized its capital account, there would be huge net outflows from both equity and bond markets as domestic investors seek to diversify their larger domestic savings, and the stock adjustment of Chinese overseas assets will be around 15–25 percent of China’s GDP. We concur more with Bayoumi and Ohnsorge (2013) than with He et al. (2012), for the following reasons. First, there has been a strong positive relationship between the expectation of RMB appreciation and short-term capital inflows (Zhang and Tan, 2013). However, the narrowing of the current account surplus and the slowing down of net FDI inflows suggest that the RMB exchange rate is already close to the equilibrium level, which could reduce the incentive for speculative short-term capital to flow in. Second, as shown in Table 2, the average returns of capital in the overseas market are already significantly

<table>
<thead>
<tr>
<th>Region</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Latin American economies</td>
<td>14.09</td>
<td>14.00</td>
<td>14.02</td>
<td>14.04</td>
</tr>
<tr>
<td>Eastern European economies</td>
<td>12.06</td>
<td>12.38</td>
<td>12.47</td>
<td>12.30</td>
</tr>
<tr>
<td>Emerging Asia economies</td>
<td>13.55</td>
<td>11.72</td>
<td>11.44</td>
<td>12.24</td>
</tr>
<tr>
<td>Western Europe economies</td>
<td>12.49</td>
<td>11.55</td>
<td>10.95</td>
<td>11.66</td>
</tr>
<tr>
<td>Middle East and African economies</td>
<td>11.33</td>
<td>11.46</td>
<td>9.16</td>
<td>10.65</td>
</tr>
<tr>
<td>Developed Asia economies</td>
<td>9.00</td>
<td>9.31</td>
<td>7.49</td>
<td>8.60</td>
</tr>
<tr>
<td>World average</td>
<td>12.21</td>
<td>12.05</td>
<td>11.56</td>
<td>11.94</td>
</tr>
<tr>
<td>China</td>
<td>11.57</td>
<td>11.60</td>
<td>11.57</td>
<td>11.58</td>
</tr>
</tbody>
</table>

Source: Bloomberg.
Notes: 1. Return of capital (ROC) = (net profit + interest payments after tax)/(Shareholder’s equity + liability with interest); 2. ROC in a region or country = ROC of listed companies registered in the region weighted average by stock market value. Data for the year 2012 is the result of the first quarter of the year 2012.

7The specific measures include: the quota of QDII and QFII were increased significantly, the renminbi QFII was introduced; the establishment of the Shanghai Free Trade Zone and the Qianhai Special Zone; and the through-train mechanism between Hong Kong’s H share market and Shanghai’s A share market.
higher than that in China, which could push Chinese entities to allocate more assets out of China. Considering the current financial repression, Chinese households could not find enough investment channels to allocate their assets. If the capital account were fully liberalized, Chinese households would have a strong appetite for overseas assets, leading to massive capital outflows and potentially some kind of financial crisis.

**Brief Summary**

To sum up, on the one hand, the more stable long-term capital inflow (direct investment inflow) will shrink in the future; on the other hand, the more volatile capital flows (portfolio investment flows and other investment flows) will increase in the future. As a result, China’s capital account balance would become much more volatile from now on. Both the scale and the direction of short-term capital flows would be more unpredictable and more difficult to deal with.

**IV. The Policy Implications for China’s Falling Twin Surpluses**

With the gradual reduction in the twin surpluses of China’s balance of payments, there would be important policy implications not only for the Chinese economy but also for the global financial market, particularly the US Government bond market.

**Implication 1: Promoting the Normalization or Even Overshooting of US Government Bond Yields**

At present the Fed and the PBC are the two largest holders of US Government bonds. According to the data issued by the US treasury, the PBC held over US$1.28tn in government bonds by the end of June 2013. On the one hand, the Fed has already begun to exit from quantitative easing (QE) by gradually cutting the purchase of long-term treasury bonds. On the other hand, as the shrinking twin surpluses slow down the accumulation of China’s foreign exchange reserves, the demand for US Government bonds from the PBC will also decline. Therefore, if the demand from private investors cannot fill in the gap of the decreasing demand from both the Fed and the PBC, the market value of US Government bonds would decline, and the yields of US Government bonds would unavoidably rise. The three rounds of QE once pushed the yields of 10-year US Government bonds to a historically low point of 1.6 percent, and the yield for 10-year USA treasury bonds was around 2.8 percent by the end of June 2014. In the future, as the demand from official investors shrinks, the yields of US Government bonds will continue to normalize. If the reduction in official demand is too rapid, there is also some risk of overshooting of US Government bond yields.
The continuous rise in US Government bond yields will result in a rise in other long-term interest rates in the USA, thus restraining the USA’s economic recovery.

Implication 2: Terminating the One-way Appreciation Process of the RMB
The twin surpluses created the excess demand for RMB in the foreign exchange market, pushing the RMB to appreciate against all major currencies. The one-way appreciation expectation of the RMB exchange rate attracted considerable short-term capital inflow. Some of the arbitraging capital inflows took the form of portfolios or other investments, expanding the capital account surplus. Other arbitraging capital inflows took the form of over-invoicing in exports and under-invoicing in imports, pushing up the current account surplus. Zhang and Tan (2013) find that RMB appreciation or depreciation expectation is the most important driver of China’s short-term capital flows. In other words, there is a mutual reinforcing relationship between China’s twin surpluses and RMB appreciation expectation.

However, China’s current account surplus to GDP ratio has been below 3 percent for 3 consecutive years since 2011, which shows that the current RMB exchange rate is very near its equilibrium level. For the short term, along with the tapering off of US quantitative easing and the slowing down of the potential growth rate of the Chinese economy, the interest rate spread between China and the world will shrink. In the mid-term, China’s inflation will be persistently higher than the USA’s inflation. In the long term, the USA’s labor productivity growth might speed up with new technology, and the structural transition of the Chinese economy might drag down China’s labor productivity growth. The above three trends all indicate that the one-way appreciation process of the RMB against the US dollar will terminate soon. If the Chinese Government accelerates the liberalization of the capital account, the potential capital outflow might cause the RMB to depreciate against the US dollar in the future.

Implication 3: Alleviating the Sterilization Pressure of the People’s Bank of China, but Creating New Challenges for the People’s Bank of China’s Monetary Policy
The persistent twin surpluses and the PBC’s intervention in the foreign exchange market cause huge injections of RMB through the PBC’s purchase of US dollars. To avoid over-liquidity in the domestic market, the PBC has to sterilize a large proportion of newly created RMB. Over the past 10 years, the PBC has undertaken heavy sterilization through both issuing central bank bills and raising the required reserve ratio (RRR) for commercial banks. On the one hand, the PBC’s sterilization has enhanced the independence of monetary
policy and restrained the rising inflation and asset prices. On the other hand, the continuously heavy sterilization has brought a huge cost not only to the PBC itself (in the form of sterilization costs) but also to commercial banks (in the form of low yields for required reserves) and Chinese households (in the form of negative real deposit interest rates) (Zhang, 2012).

However, as the twin surpluses keep shrinking, the quantity of the RMB injected by the PBC through purchasing the US dollar will decrease, which will alleviate the sterilization pressure for the PBC but also create a new problem. In fact, over the past decade, the RMB injection through the PBC’s purchase of US dollars has become the most important channel for the PBC to issue base money. Therefore, as a result of the fading twin surpluses, the PBC must find a new way to issue enough base money to support economic growth. We predict that the PBC will adopt the following measures to deal with this new challenge. First, the PBC will stop using central bank bills as a major monetary tool in principle, because the cost of issuing central bank bills is relatively high for the PBC and there will be no need for heavy sterilization in the near future. Second, the PBC will lower the required reserve ratio to release liquidity into the market. Third, the PBC will frequently use the new open market tools (such as repo, reverse repo and short-term liquidity operation) to adjust the liquidity level in the domestic market. Finally, the PBC may re-introduce re-lending as a mid-term tool to inject new liquidity. For example, there is now some talk that the PBC is planning to introduce pledged supplementary lending or a mid-term loan facility as a mid-term monetary tool to adjust the market liquidity.


The huge foreign exchange reserves resulting from persistent twin surpluses and effective capital account control are two important buffers for the Chinese economy to deal with both external and internal negative impacts. In the future, the diminishing twin surpluses will mitigate the accumulation of China’s foreign exchange reserves. If the twin surpluses were to become twin deficits, China’s foreign exchange reserves might shrink significantly in a relatively short time. Moreover, considering that the Chinese Government plans to accelerate the liberalization of the capital account, a potentially huge outflow of domestic savings could create a huge capital account deficit, which would force the devaluation of the RMB. The RMB depreciation expectation would result in a new round of capital outflow. If the Chinese Government intervenes in the foreign exchange market, the stock of foreign exchange reserves might decrease quickly. Although China’s foreign exchange reserves are near US$4tn now, this is still limited in comparison to Chinese household and corporate savings, or China’s M2 stock. Under the worst scenario, even China’s foreign exchange
reserves might not be enough to mitigate the negative impact of massive capital outflow. Under such circumstances, it is quite likely that the Chinese Government would re-introduce some capital management measures. That is the reason why Gallagher et al. (2014) suggest that the Chinese Government should adopt a more gradual method to liberalize its capital account.

V. Conclusion

China has had both a current account surplus and a capital account surplus for over a decade. However, the twin surpluses could be gone in the future due to certain structural factors. The liberalization of domestic factors, the appreciation of the RMB exchange rate and the weak external demand will push the goods trade surplus down. The opening up of the Chinese service sector and financial market might widen the service trade deficit and amplify negative investment income. As a consequence, China’s current account surplus is likely to shrink in the future. The structural adjustment of Chinese economy would weaken the incentive for FDI, but the incentive for domestic enterprises to invest abroad would strengthen under the support of the Chinese Government, which would reduce or even reverse the net direct investment inflow. The scale of short-term capital flows would increase, but they are very volatile. Therefore, China’s capital account balance would face some uncertainty. For example, the capital account might shift from surplus to deficit very quickly due to internal or external impacts.

The gradual vanishing of China’s twin surpluses would generate some important policy implications for both the global and domestic economies. The US Government might find it more difficult to finance their fiscal deficit, so they would have to raise the yields of treasury bonds significantly. The one-way appreciation process of the RMB against the US dollar would terminate soon, and the possibility of the RMB’s depreciation against the US dollar under some scenarios could not be excluded. The sterilization pressure for the PBC would be alleviated; however, the PBC should find a new channel to issue base money. The diminishing twin surpluses together with the accelerated capital account openness might bring about new financial vulnerability for the Chinese economy, especially increasing the risk of potential capital outflows.

To deal with the new impacts brought by the shrinking of the twin surpluses, we provide the following policy suggestions for the Chinese Government. First, to avoid a large service trade deficit in the future, the Chinese Government should break the monopoly of SOEs in many service sectors and open up these sectors to domestic private enterprises as soon as possible, in order to enhance the competitiveness of the Chinese service sector.
more quickly. Second, to improve the yields of Chinese overseas investment, on the one hand, the Chinese Government should continue to encourage domestic enterprises, especially domestic private enterprises, to investment abroad; on the other hand, Chinese households’ overseas investment could also be allowed and encouraged at a gradual and controllable pace. Third, the Chinese Government should continue to liberalize its capital account in a cautious and gradual way to avoid a financial crisis. At least the full openness of China’s capital account should follow three prerequisites: the RMB’s exchange rate and interest rate mechanism should be largely liberalized; the domestic financial market should be open to domestic private players first; the existing vulnerabilities of the domestic financial market could be detected and handled. Fourth, even after the Chinese Government liberalizes the capital account, the short-term capital flow should still be closely monitored by the PBC. If necessary, some price-based policy measures (such as Tobin tax or macro-prudential regulations) could be introduced to reduce the negative impacts of volatile capital flows.

References

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