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Imbalances in China and U.S. Capital Flows

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Abstract: China's major imbalances include trade and capital account surpluses and a large annual build-up of international reserves. China has a capital account surplus reinforcing the accumulation of foreign exchange reserves, mainly U.S. dollar-denominated assets. Usually, a sustainable fixed or floating exchange rate system requires that a country with a large current account surplus run a capital account deficit. The U.S. is widely criticized for having a comparable trade deficit that mirrors, to a large extent, China's surplus and for its dependence on large capital inflows including from China. There is political pressure for protectionism and for China to implement wasteful economic policies to reduce the surplus.

Negative consequences of China's imbalances include the build-up of large, low-return foreign exchange, leading to rapid growth in money and credit and to a sharp acceleration in inflation. Moreover, efforts to offset money growth and inflation have deepened inefficiencies in the financial system, which China had hoped to remedy by its efforts to recapitalize and list its banks' equities on stock exchanges. China could eliminate these imbalances by policies that would reduce growth. One solution is to lift restrictions on capital outflows, allowing households and business to diversify their wealth holdings and realize higher returns and/or less volatility in their income and wealth. This would transform future asset growth to holdings of higher return, lower risk assets abroad and also would eliminate pressures on the People's Bank of China, allowing for more rapid deregulation of banks, slower money and credit growth and lower inflation. The U.S. is already adjusting to these imbalances as the current account deficit began to decline in 2005 and the dollar has fallen dramatically. Unfortunately, such adverse developments are coming from political pressures to raise taxes, especially on capital resources income, and from protectionist policies, both of which are slowing growth in the U.S.

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U.S. and Chinese economic relations are principal components of each country's international transactions with the rest of the world. But these transactions are not balanced for either country and potential imbalances in their respective international transactions could have important effects on their economic performance and growth possibilities, and could create significant geopolitical issues for each country.

International trade in goods and services attracts the most attention, with the U.S. running a large and persistent current account deficit, while China runs a large surplus.¹ More to the point, China is a very important source of U.S. imports and accounts for a large share of the U.S. current account imbalance, while the U.S. is an important market for China's exports, and hence accounts for a large share of China's current account surplus.

Whether these trade balances constitute imbalances is open to question, but proposed remedies are commonplace.

But international trade is not simply about goods and services. Capital flows are a large and perhaps more significant aspect of a country's international relations and typically provide the mirror image of a country's balance on trading goods and services. More importantly, capital flows can have a more important effect on economic activity and on economic growth. Capital inflows are an important source of financing for domestic investment activities and the 'direct' component of capital inflows often bring with them not only the investments in productivity that are financed, but also productive entrepreneurial, organizational and management skills. Capital outflows provide a source of profitable business expansion for domestic firms, accessing new markets, technologies and resources, and for investors (consumers, business and government) who gain access to new financial products, better rates of return or lower risk on financial assets.

In the case of the U.S. and China, both countries are relatively open, but there are large differences in the openness and role of their capital transactions in each country. The U.S. is very open and because of its advantages as a relatively free market and technology and productivity leader among developed nations, it attracts a relatively large share of global capital, and its capital outflows are also relatively large. The most significant point is that net capital inflows finance the imports and current account deficit that attract so much political attention in the United States and the demand for U.S. dollars to finance the acquisition of U.S. assets often drives the balance of payments and the value of the dollar. More importantly, the U.S. has a fluctuating exchange rate so that the net capital surplus in its transactions, (called a capital account surplus here) finances the current account deficit, the excess of U.S. imports of goods, services and resource services over its exports.

In China, capital inflows are also open and are large relative to gross domestic product (GDP). In the past few years, capital outflows from China have been sizable, but have

¹ The current account refers to Balance of Payments accounting where the current account measures the exports (credit, +) and imports (debit, -) of goods, services, income payments for resource services and unilateral international transfers.

fallen short of the capital inflow, so that China has persistently had a net capital inflow to go along with its current account surplus. To maintain the exchange rate, which would otherwise appreciate the value of domestic currency, the yuan, the People’s Bank of China has had to acquire the excess funds flowing into the currency and hold it as official reserve assets, principally in U.S. Treasury securities, or other foreign currency assets. Because of the large surpluses, China has been under international pressure, especially from the United States, to appreciate the value of its currency, in order to change trade and investor behavior to eliminate the surpluses in their international accounts.

Generally China’s so-called imbalances—a large current account surplus, a capital account surplus and a large annual accumulation of foreign exchange or official reserve assets generally—have been viewed as problems for their trading partners and for their consumers. There are similar popular sentiments among many analysts and policymakers in the U.S. about the relatively large U.S. current account deficit and about the increasing amount of government debt being accumulated abroad, especially in China. This article provides some perspective on these problems, how they are related and some potential remedies. The focus here is on the respective capital account imbalances and how they might be used to restore some balance to each country’s international payments accounts. But first, in Section I the trade situation is reviewed to set the stage for the discussion. Section II focuses on the capital account in each country and Section III provides a discussion of some potential remedies to imbalances. Section IV provides a summary and some concluding remarks.

I. The China and U.S. Trade Imbalances

The U.S. and China have relatively large current account balances, with China having perhaps the largest surplus and the U.S. a deficit. Table 1 shows the current account balance of each country for 2007, measured in U.S. dollars and as a percent of each country’s GDP, as well as the contribution of each countries trade to the others measures.

Table 1
Current account components of the Balance of Payments

U.S. and China Balance of Payments, 2007									
(Billions of U.S. dollars)	China	% GDP	U.S. share	% of total	U.S.	%GDP	China share	% of total	
Current account balance	\$371.8	11.5%	\$289.7	77.9%	-\$738.6	-5.3%	-\$289.7	39.2%	
Exports of goods and service	1344.2	41.4	330.5	24.6	1628.4	11.8	79.3	4.9	
Imports of goods and service	1034.7	31.9	79.3	7.7	2336.9	16.9	330.5	14.1	

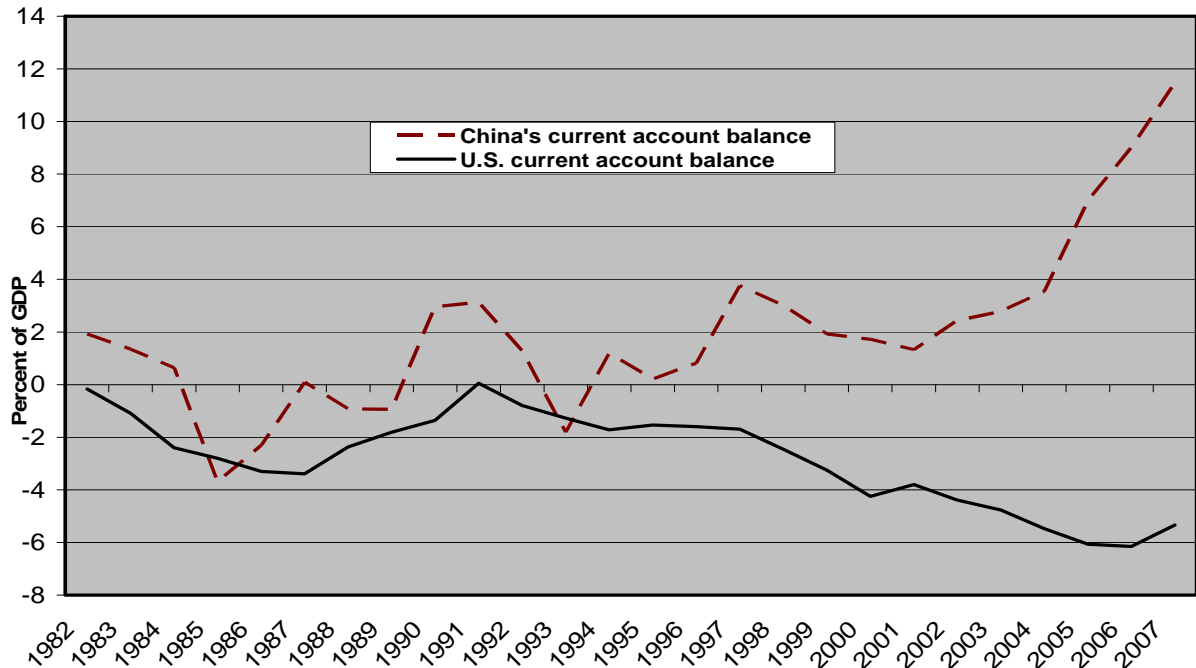
Source: U.S. Bureau of Economic Analysis; State Administration of Foreign Exchange

The Chinese current account surplus is one of the largest in the world relative to its Gross Domestic Product (GDP). It reflects exports of goods and services that amount to 41.4 percent of GDP, while imports of goods and services are a huge, but smaller, 31.9 percent of GDP. Both figures reflect the high degree of openness of Chinese trade. The U.S. also is very open, with relatively large trade as a share of its GDP, though much smaller than China’s figures. In the U.S., there is a large current account deficit of \$738.6 billion in 2007, 5.3 percent of U.S. GDP. The U.S. deficit actually was smaller in 2007 than in

2006, down from \$811.5 billion or 6.1 percent of GDP. This can also be seen in Chart 1, where the current account as a percent of GDP for 1982 to 2007 is shown. The current account deficit in the U.S. is a reverse image of the surplus in China, though this largely reflects the persistence and growth of each balance over the period.

Chart 1
China's and U.S. current account imbalances

The most notorious imbalances are in the current account



Source: U.S. Bureau of Economic Analysis

It is this similarity that attracts so much popular interest in both countries, with U.S. critics pointing out that there is a strong link between these two balances and that the U.S. deficit may even be caused by the trade and exchange rate policies that, in their view, hold down the prices of Chinese goods, largely by fixing the yuan-dollar exchange rate, so that U.S. firms and consumers buy a relatively large amount of Chinese exports and export little of their relatively high-priced goods and services to China. As evidence, critics point to a relatively large build-up of foreign exchange or official reserve assets in China, which they believe indicates the imbalance because the Chinese are willing to allow their central bank, the People's Bank of China, to acquire this excess flow of dollars to China and hold it in very low interest U.S. government securities instead of allowing the yuan to appreciate, which would reduce China's exports/U.S. imports and boost China's imports/U.S. exports to restore balance, or at least move toward balance in each country's current account balance.

There are many errors in this analysis which render it false. The most basic problems are that trade is only one aspect of international transactions, so that attempts to intervene in

trade can have undesirable effects on capital flows and on the exchange rate, and, second, trade with one country is not the source of a nation's overall trade imbalance. The latter is influenced by the capital account and by other macroeconomic features of an economy.² It is not the purpose here to explore these fallacies, but the data do suggest that U.S. and Chinese international trade relations are dominated by the other. Table 1 supports this view, especially for China, using data from the U.S. Bureau of Economic Analysis at the Department of Commerce. The U.S. takes almost a quarter of China's exports. While U.S. exports only make up 7.7 percent of China's imports, the U.S. current account deficit with China accounts for 77.9 percent of China's surplus. This sounds like the U.S. is China's biggest customer and indeed the U.S. is China's largest trading partner, its number one customer for its exports and the third largest supplier of China's imports, behind Japan and South Korea, respectively.

China trade does account for a significant share of the U.S. current account deficit. In 2007, the U.S. current account deficit with China was \$289.7 billion, 39.2 percent of the overall U.S. current account deficit. China accounts for only 14.1 percent of U.S. imports of goods and services and U.S. trade is more diversified. China ranks second (10.3%) as the U.S.' largest trading partner behind Canada (16.8%), barely edging out Mexico (9.8%). Thus, while U.S. trade is very important to China, especially its share of China's exports, these Chinese exports are a smaller share of U.S. imports of goods and services, because of the larger trade with neighbors and more diversified sources of trade. China's leading trade partner, the U.S., accounts for 32.5 percent of China trade in goods and services, while the U.S.' top trade partner, Canada, accounts for 16.8 percent of U.S. trade; China, accounts for 10.3 percent.

II. The U.S. and China Capital Account Imbalance

Table 2 shows the U.S. capital account in 2007. It is included to provide the more detailed components of the capital flows discussed here. First note that it is officially called the "financial" account and that there is, in fact, another account called the "capital" account. The real capital account in the official balance of payments statistics of countries is for movements of real capital items, particularly (gifts), of used equipment across borders. It is typically very small. The capital transactions of interest here are the acquisition or sales of financial assets, especially for direct investment abroad or for foreign direct investment, or portfolio investment in bonds and stocks, or in bank deposits or loans. These financial transactions are lumped together as capital inflows or outflows here and their net balance is referred to as the capital balance here.

² See Tatom (2007) for a discussion of some of the arguments over the US-China trade imbalance and the likely lack of justification and the ineffectiveness of bilateral exchange rate or trade policy actions in eliminating a multilateral imbalance. Cheung, Chinn and Fujii (2008) provide supporting evidence that the Renminbi is not misaligned, so that efforts to force a currency appreciation are doomed to failure, as they did earlier (2007). See also Bailey and Lawrence (2006).

Table 2

U.S. International Capital and Financial Transactions	
[Millions of dollars]	
(Credits +; debits -)	2007
Capital account	
Capital account transactions, net	-2317
Financial account	
	-
U.S.-owned assets abroad, (increase/financial outflow (-))	1206332
U.S. official reserve assets	-122
Gold	0
Special drawing rights	-154
Reserve position in the International Monetary Fund	1021
Foreign currencies	-989
U.S. Government assets, other than official reserve assets	-22931
U.S. credits and other long-term assets	-2441
Repayments on U.S. credits and other long-term assets	3450
U.S. foreign currency holdings and U.S. short-term assets	-23940
	-
U.S. private assets	1183278
Direct investment	-335415
Foreign securities	-273851
U.S. claims on unaffiliated foreigners reported by nonbanking concerns	15819
U.S. claims reported by U.S. banks, not included elsewhere	-589831
Foreign-owned assets in the United States, (increase/financial inflow (+))	1863697
Foreign official assets in the United States	412698
U.S. Government securities	231852
U.S. Treasury securities	49900
Other	181952
Other U.S. Government liabilities	5673
U.S. liabilities reported by U.S. banks, not included elsewhere	108456
Other foreign official assets	66717
Other foreign assets in the United States	1450999
Direct investment	204414
U.S. Treasury securities	166301
U.S. securities other than U.S. Treasury securities	391884
U.S. currency	10937
U.S. liabilities to unaffiliated foreigners reported by nonbanking concerns	166579
U.S. liabilities reported by U.S. banks, not included elsewhere	510884
Statistical discrepancy	83590

A second clarification is that the U.S. includes official reserve transactions, which include Federal Reserve Bank acquisition of securities abroad (debit) and foreign official assets acquired by foreign central banks (+), including the Peoples Bank of China. Some countries do not include these in the financial account and, instead, account for these “below the line” as the financing item for any remaining balance of payments. In the data reported below, China and the International Monetary Fund do this. In the U.S. case, “official reserve assets” are typically small because the Federal Reserve does not engage in active management of its reserves, but foreign central banks do and they typically hold much of their foreign exchange in U.S. Treasury securities. These transactions are sometimes an important component of U.S. capital inflows; according to Table 2, foreign central banks acquired \$412.7 billion of U.S. government securities or loans in 2007 with funds that flowed in to them from their economies sales of goods, services or other assets to other countries.

U.S. capital and foreign exchange transactions

The simplified table for the U.S. and China in 2007 is given in Table 3 based on this more detailed information. The table also shows the current account balance from Table 1 in order to show the relationship to the capital account, and for China it shows the change in reserves, which are a large component of the overall capital inflow into the United States.

Table 3
U.S. and China have relatively large capital inflows and outflows

U.S. and China Balance of Payments, 2007								
(Billions of U.S. dollars)	China	% GDP	U.S. share	% of total	U.S.	%GDP	China share	% of total
Capital inflows	\$241.2	7.4%	\$1.9	0.4%	\$1863.7*	13.4%	\$235.6**	12.6%
Capital outflows	170.8	5.3	235.6**	137.9	1206.3	8.7	1.9	0.1
Capital balance	70.4	2.1	-233.7		657.4*	4.7	233.7	35.5
Current account balance	371.8	11.5	289.7	77.9	-738.6	-5.3	-289.7	39.2
Change in reserve assets	461.7	14.2						

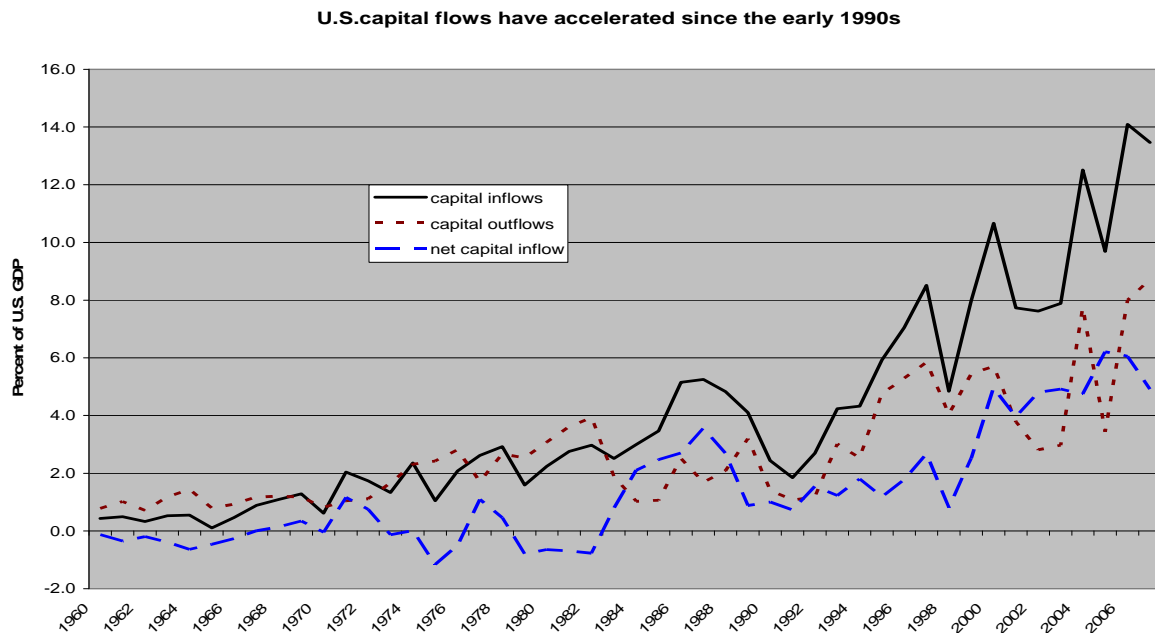
*Includes \$412.7 billion in foreign official assets

**Includes \$461.7 in increase in China's official reserve assets

Source: U.S. Bureau of Economic Analysis and State Administration for Foreign Exchange

Note that U.S. capital inflows of 13.4 percent of GDP exceed U.S. exports (Table 1) of 11.8 percent of GDP. Foreigners acquired more assets in the U.S. than they purchased of U.S. goods and services in 2007. Capital inflows are sometimes a more important source of foreign exchange for the U.S. than exports of goods and services. Capital outflows are also relatively large in the U.S., reflecting an interest of U.S. investors to diversify their asset holdings (Table 3). The positive U.S capital account balance in Table 3 offsets the current account deficit, except for a statistical discrepancy.

Chart 2 U.S. capital inflows and outflows are large and growing



Source: International Monetary Fund

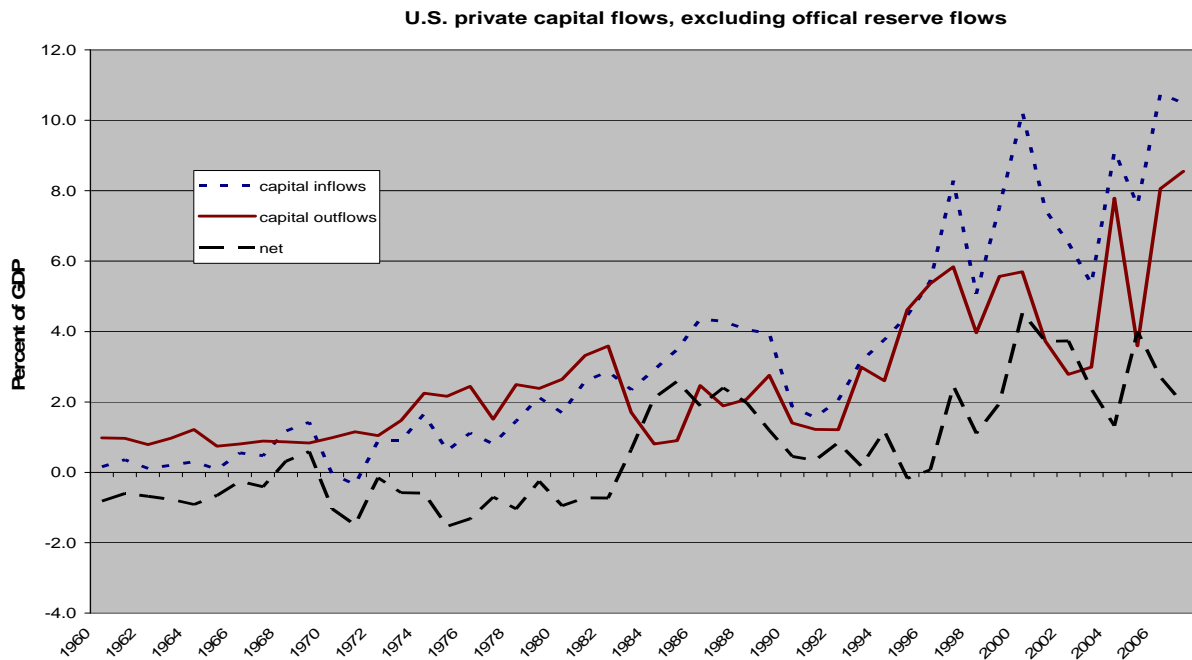
One problem with the growing U.S. capital inflows is that an increasing share of inflows is due to foreign central banks acquiring U.S. government securities as an instrument for holding their growing foreign exchange holdings. This is especially true for China, for example, which added \$461.7 billion to its reserve assets in 2007 alone and has accumulated about \$1.8 trillion in reserve assets. If the U.S. capital inflow and surplus is due to foreigners financing the U.S. trade deficit, then the U.S. remains exposed to the potentially growing unwillingness of foreign monetary authorities to holding larger and larger amounts of relatively low-interest rate U.S. government securities.³

Chart 3 shows private capital flows, excluding government and official reserve flows. The pattern of growing flows since the early 1980s and net surplus remains when these official reserve flows are excluded, but the totals are smaller and the balance even gets close to zero in 1995-96. But foreign holdings of U.S. assets as foreign exchange have been growing very rapidly and constitute a relatively large share of GDP.

³ Phillips (2008) suggests that the overall U.S. capital inflow is at risk because of concerns over future policy or simply the large indebtedness of the U.S. to the rest of the world. The diversification, liquidity, return and safety benefits to foreign investors in the U.S. are not written in stone and policy discussions and decisions over the past year raise doubts about the extent of those benefits in the future. The concentration of foreign exchange holding in a single increasingly risky name is more likely to be the tripwire for adverse global capital market developments.

Chart 3

U.S. capital flow trends are similar without official reserve flows



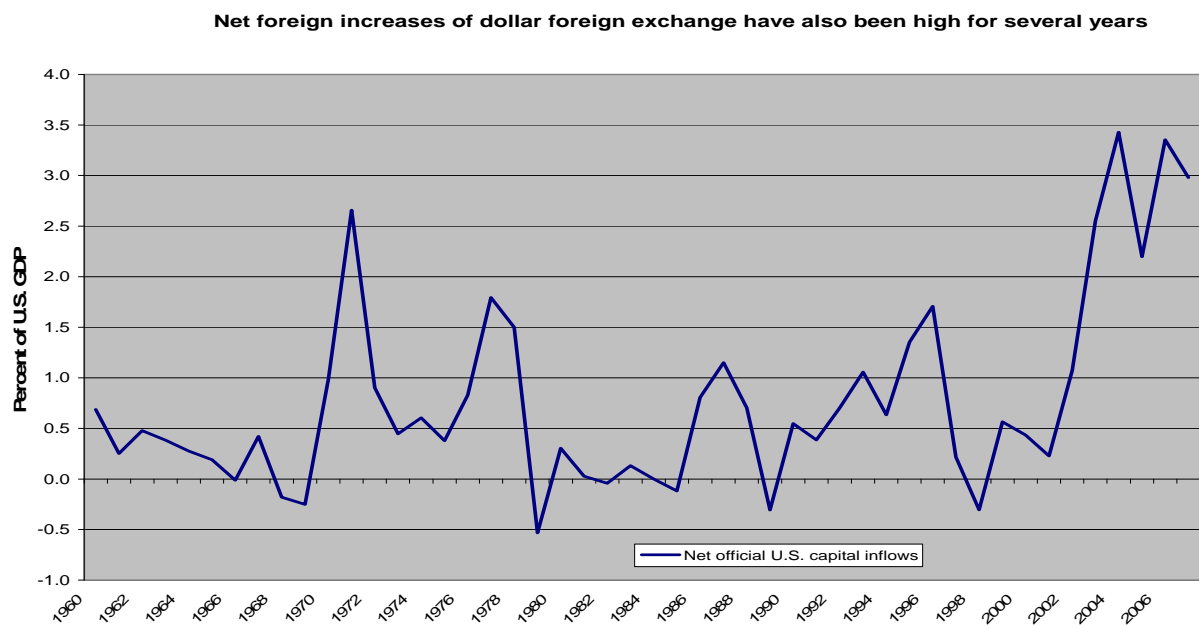
Source: International Monetary Fund

The large size of these additions to reserves each year is a risk to the U.S. economy because these securities yield relatively low returns to foreign central banks and there is currency risk, especially in recent years that makes holding these dollar-denominated securities a poor return asset for many foreign central banks. The addition of these assets to foreign central bank balance sheets also has other adverse consequences abroad. Expanding central bank reserves also expands the monetary base and the domestic money stock, and this in turn creates higher inflation in the country. Because of these consequences, foreign central banks, especially the Peoples Bank of China, could reduce their holdings of dollar-denominated assets by refusing to acquire them or by substituting other foreign exchange assets for dollars. This could have a substantial effect on the value of the dollar and the level of U.S. interest rates, in the view of some analysts. However, simply switching the currency in which to hold reserves, would have little or no effect on the currency markets, according to most analyses. Suppose China did this, then the supply of currencies they acquire would fall relative to dollars in the rest of the world and this would put upward pressure on the value of the dollar elsewhere so that there would be little or no effect on the value of the dollar or U.S. interest rates overall.

The other reaction of central banks acquiring what is viewed as excessive and perhaps increasingly risky dollar-denominated assets, ending the reserve accumulation in dollars or any other currency, would lead to an appreciation of the local currency vis-a-vis the dollar, with all the macroeconomic effects that this would have on the domestic country as well as on the U.S.

Chart 4 shows the annual increases in U.S. dollar-denominated official reserves and indicates that the share has reached unusually high proportions since 2003. The previous record in 1970 was a period of unusual weakness in the value of the dollar and led to the breakdown of the dollar-based global fixed exchange rate system. High levels in this decade have also been associated with dollar weakness. This is a major imbalance from the U.S. perspective, at least so long as there is a risk that foreign accumulation of dollars at the recent pace is unsustainable and could end or reverse.

Chart 4
Foreign increase in U.S. dollar official reserves have been unusually large since 2003



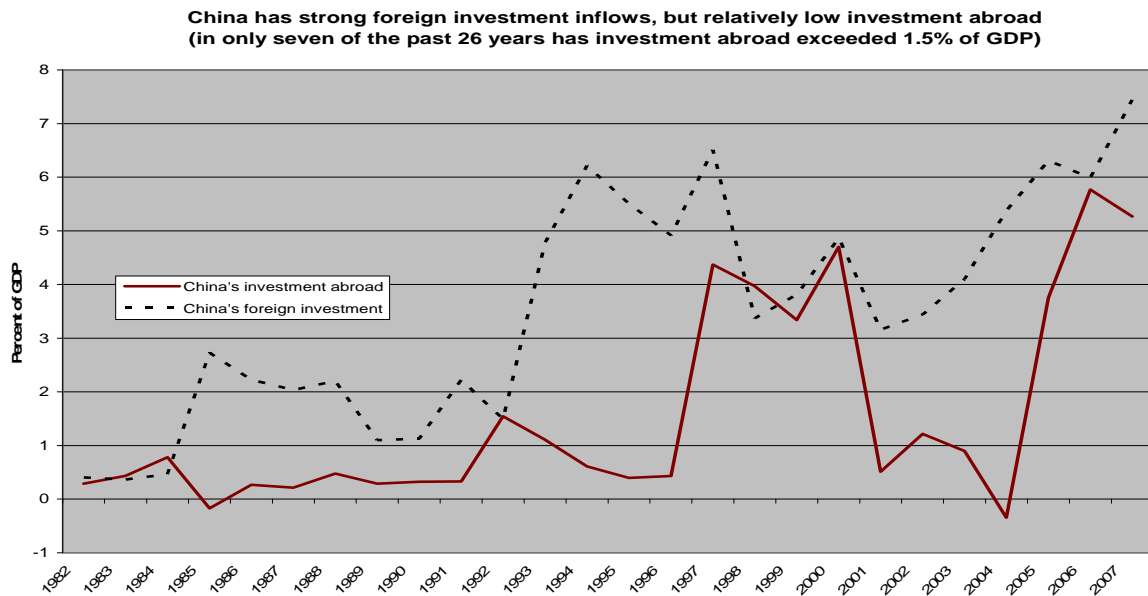
Source: U.S. Bureau of Economic Analysis

China’s capital and foreign exchange transactions

In China, capital inflows and outflows are a larger share of GDP than in many countries. The capital inflows are especially large as foreign investors are attracted by the openness of trade and the attractive cost of resources relative to productivity in China. Foreign direct investment in China in 2007 was \$138.4 billion, more than half the total capital inflows. This flow compares favorably with the U.S. total foreign direct investment of \$204.4 billion, which is only about 11 percent of the total U.S. capital inflow that year. China’s attractiveness for foreign direct investment leads that of emerging markets and most of the world.

Chart 5

China has strong capital flows, but outflows are relatively weak



Source: International Monetary Fund and State Administration for Foreign Exchange

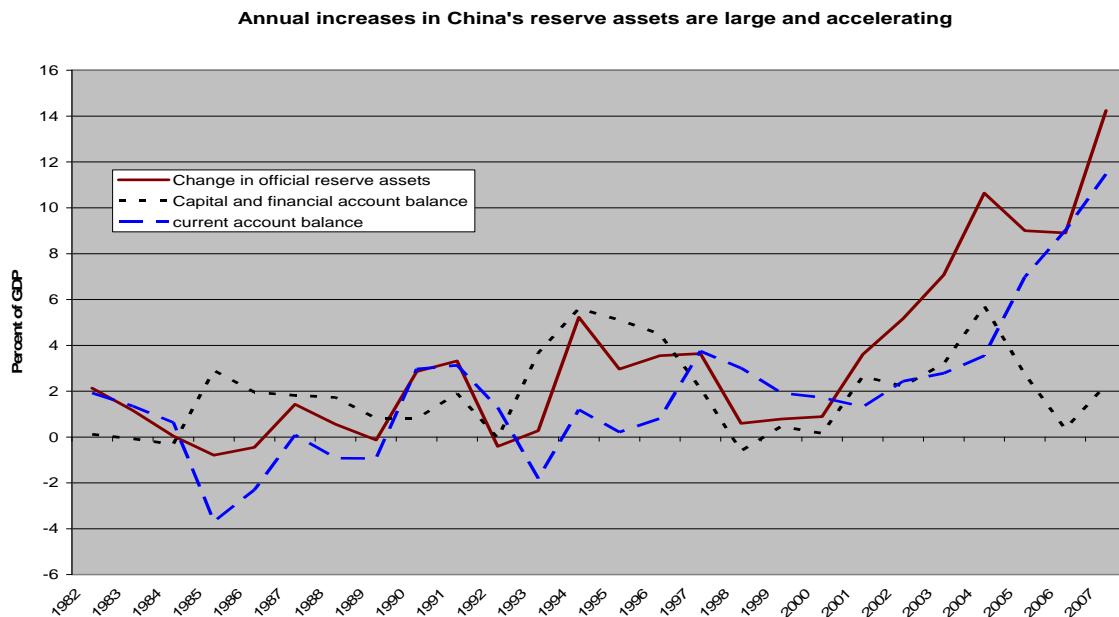
The capital account balance typically mirrors the current account and is often the driving force determining the current account balance. It is the overall balancing item in a country such as the United States, where there is little government or central bank intervention in the foreign exchange market and little or no attempt for any other reason to manage international reserves. Exchange rates are allowed to adjust so that the balance of payments balances without any required intervention by the Federal Reserve. The capital account balance is not the balancing item in a country like China, however. Indeed, the Chinese capital account balance usually shows a surplus, as seen in Chart 5. Thus the dollars that flow in to China to pay for exports are not fully used to purchase imports and those dollars are not used to buy foreign assets, on net, either. Instead the net dollar flow from trading goods and services is supplemented by the net dollar flow arising from the net flow of dollars to acquire China's assets. The key balancing item in the Chinese balance of payments is the official reserve assets, which reflect the rate of addition to official reserve assets. This is part of the fixed exchange rate system that China followed from 1994 to 2005 and a continuing component of exchange rate and monetary policy under the managed float policy followed since then.

Rather than a capital account deficit, which would represent China's net purchases of assets abroad, including acquisition of foreign currency balances in foreign bank accounts, China has a persistent capital account surplus. This is the major "imbalance" in the capital account that can be identified in this paper, and it feeds or enlarges the third Chinese imbalance, the large and growing accumulation of reserve assets. China's balance of payments has the classical appearance of a "mercantilist" nation aiming to enrich itself by accumulating official reserve assets by exporting its goods, services and

capital to accumulate gold or other foreign exchange reserves. The welfare losses associated with such policies date back at least to Adam Smith’s classic work (1776).

The official reserve asset imbalance is shown in Chart 6, along with its principal sources, the current account and capital account balances; the other source of the change in foreign exchange reserves is “errors and omissions,” which is not shown. China persistently accumulates foreign exchange, indeed it is an accelerating annual share of GDP despite rapid GDP growth. By the end of 2007, the People’s Bank of China held \$1.5 trillion of foreign exchange, almost one-half year’s GDP, and growing rapidly. While the chart indicates that it is the accelerating current account balance that accounts for most of the explosive growth of reserves since 2004, the capital account also played a significant role over most of the past 25 years.

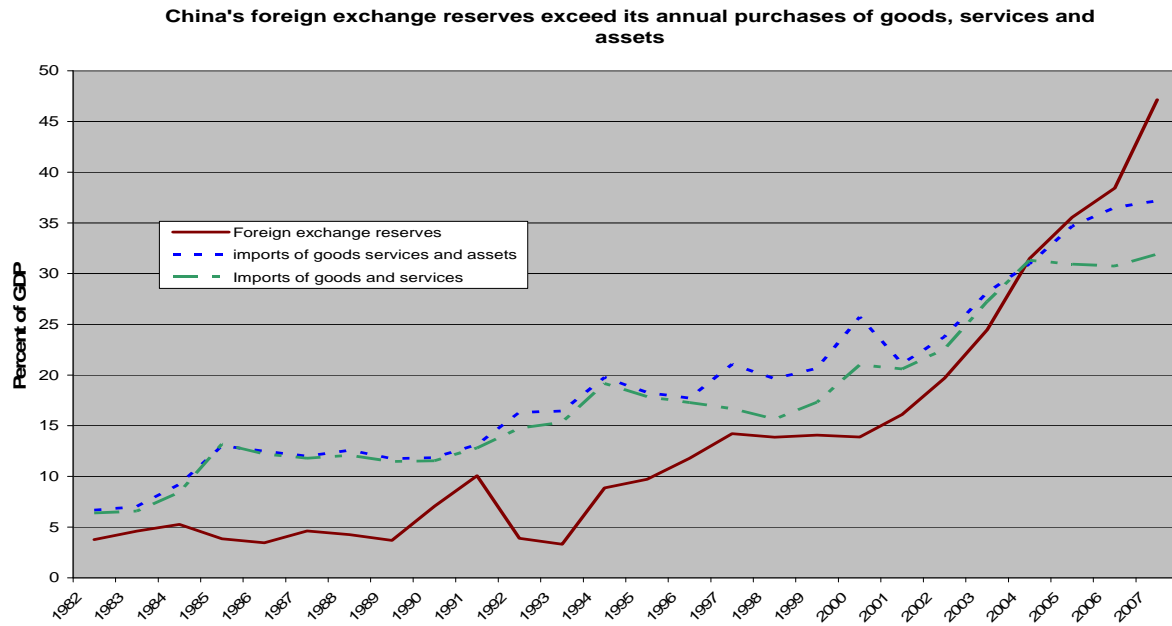
Chart 6
Chinese official reserve assets are accumulating at an accelerating rate



One perspective on the excessive level and growth of reserves is provided by a comparison of foreign exchange assets to the external spending of a nation. Credit analysts often evaluate a country’s foreign exchange assets by comparing them to imports of goods and services; the standard criteria that a country has adequate reserves if they exceed three months or one quarter of a years imports. The indicator suggests that the country could pay for its imports for three months in a crisis in which it could not obtain credit or earn foreign exchange by exporting. In China’s case, the nation could meet such a crisis and cover its imports of goods, services and assets for over a year. Chart 7 shows that China’s foreign exchange (the most liquid component of official reserves, so not including gold or other international reserve assets) have grown to exceed not only its annual imports of goods and services, so four times an adequate level, but more than its

purchases of goods, services and assets abroad. At nearly 50 percent of GDP, China's foreign exchange is the highest of all the nations in the world measured relative to GDP.

Chart 7
China's foreign exchange reserves are large relative to its annual foreign expenditures



The China-U.S. financial transaction connection

Table 3 shows that U.S. investment in China plays a relatively minor role in China's financial markets, but this understates the case to an extent. U.S. direct investment in China in 2007 was \$5.7 billion and banks loaned Chinese firms \$3.4 billion, but other investors liquidated some \$11.1 billion in security holdings in China. None of these figures alter the fact that U.S investment in China in 2007 was relatively minor for the Chinese or for American investors. Since 1999, U.S. direct investment in China has been 5 percent or less of foreign investment in China, except in 2004 when it was 8.1 percent. Of course these small numbers are even smaller relative to U.S. GDP or overall U.S. direct investment or total investment abroad.

Table 3 does suggest that capital outflows from China to the U.S. make up a significant share of China's total outflows and of U.S. capital inflows, but this is completely misleading because the data are not comparable and hence the share is labeled as not comparable. The reason, as noted earlier, is that the total outflow for China does not include acquisition of official reserves, primarily U.S. government securities, but the U.S. data do include this. Excluding this \$461.7 billion of reserve assets in 2007, suggests that the remainder of capital outflows were negative in 2007, or the Chinese liquidated other asset holdings abroad. Both aspects of the data reinforce the problem noted above. China does not invest abroad, except to acquire U.S. government securities as reserve assets, and these purchases make up a huge share, actually more than all of the increased

holdings of all official foreign assets in the U.S. (\$412.7 billion). These inflows from China accounted for over 20 percent of all U.S. capital inflows in 2007 and brought total capital inflows from China up to 12.6 percent of all capital inflows to the U.S.

In summary, the capital flow data indicate that U.S. capital flows to China are minor from the perspective of either country, most capital outflows from China, especially to the U.S. are relatively small, but that foreign exchange flows to China are substantial, both from the point of view of China's international transactions or its GDP and relative to overall acquisition of U.S. government securities in the U. S. by the rest of the world, or relative to overall U.S. capital inflows.

III. Potential Remedies

The potential remedies for international transaction imbalances depend upon identifying the imbalances that are of concern. Commonly identified imbalances that have been examined here are the Chinese and U.S. trade imbalances, the excessive Chinese capital account balance and the foreign exchange level and growth in China. The second issue concerns the possibility of either country to unilaterally change these imbalances by actions directed at the other. A country's transactions with the rest of the world are in part determined by its macroeconomic performance relative to the rest of the world, so that taking action to alter the economic relationship with one country simply results in substitutions of transactions with other nations. An example of this is the proposal of many U.S. critics of the outsized imports from China who believe that actions to push up the value of the yuan will reduce those imports, improve the U.S. trade balance and also reduce the pace of Chinese accumulation of U.S. government securities, thereby slowing growth of the Chinese money supply and reducing inflation. It is the case that a government can intervene in the market for its currency and bring about a changing its value, at least within limits. But such change would simply make it likely that the now more expensive Chinese goods would be replaced by cheaper imports from China's competitors, especially other Asian producers in Indonesian, Vietnam, the Philippines and elsewhere. An appreciation of the yuan is not likely to have much effect on the U.S. trade imbalance; it would simply move it from China to other nations.

An appreciation of the yuan against all currencies would reduce China's trade surplus and could reduce pressures on foreign exchange reserve growth, money growth and inflation, but it would also disrupt production and employment at many domestic firms and, more importantly, it could produce a speculative surge in capital inflows and make the capital account, monetary policy and inflation problems worse, and create a potential for a future reversal of the capital flow and currency collapse reminiscent of the patterns associated with the 1997-98 Asian crisis.⁴ Concern for the avoidance of a surge in portfolio investment and subsequent outflow is probably the second main reason for China's fixed exchange rate regime from 1994 until 2005.⁵ The principal reason was to provide a

⁴ Goldstein and Lardy (2008) argue that the Chinese have not appreciated their currency enough since the amount allowed so far has been accompanied by a growing current account surplus and an acceleration on foreign exchange growth.

⁵ Capital controls typically apply to inflows, but putting restrictions on inflows or outflows reduce incentives for foreigners to invest in a country. Chilean restrictions on capital inflows outflows from 1991-

monetary anchor for monetary policy and inflation. Thus, a policy of appreciation of the yuan would have little effect on the U.S. trade imbalance and it could have serious adverse risks on the Chinese economy within a few years.

There are several remedies that ultimately rely for their effectiveness on slowing the U.S. economy's growth (slower import growth, improved relative prices for exports relative to imports, reduced rates of return to capital and foreign investment) or faster growth in China. Countries do not consciously choose slower economic growth and countries growing at their capacity rates are not easily encouraged to pursue inflationary policies or policies that waste resources in order to gain some short-term output gain. Countries sometimes do take up protectionist policies that indirectly slow growth and reduce current account deficits and capital account balances, but such actions damage domestic business and citizens, so have little to recommend them.

The most obvious step that the Chinese could take is to open up the capital account.⁶ Beginning in February 2007, current account transactions were liberalized so that Chinese businesses, both domestic and non-domestic, can freely move foreign exchange across the border for import or export purposes. The same is not true for capital account transactions, especially capital outflows.⁷ Capital outflows are quite limited for Chinese households and investors. That is a primary reason for the small capital outflows, even in recent years. Removing restrictions would reduce the net capital inflow and foreign exchange build-up in China dollar-for-dollar with each dollar increase in capital outflow,

98 were expected to insulate the country from the sudden stops of capital inflows associated with the financial crises in Asia. Instead, the restrictions acted as a disincentive to invest in the country and the undesired fall in the capital account balance was accomplished by a surge in outflows instead of a decline in inflows. See Forbes (2007) for evidence of how these restrictions also raised the cost of capital for smaller traded domestic firms and Gallego, Hernandez and Schmidt-Hebbel (2000) and Cowan and De Gregorio (2005) for overviews and lessons from the Chilean experience.

⁶ Cappiello and Ferrucci (2008) focus on the importance of opening the capital account and moving toward a flexible exchange rate as sequenced steps to reduce the opportunity cost of a fixed exchange rate system. They do not single out the benefits of lifting capital outflow restrictions, however, which are emphasized here. People's Bank of China Deputy Governor Xiang (2006) provides an excellent review of China's financial sector and economic development and outlines the next steps to be taken. He notes the importance of a harmonious relation between economic development and development of the financial sector. He also points to the importance of developing internal financial markets and opening the sector to global competition.

⁷ Chinese authorities have made recent changes in tax incentives for capital inflows that will reduce such investments, but these changes are strongly in the interest of promoting economic efficiency and equality and may actually boost the attractiveness of investing in China. Earlier, in order to promote direct investment, tax incentives were given that lowered the income tax rate paid by foreign firms. These may have been successful in priming the pump for foreign investment, but they misallocated capital and other resources within the economy. Ending those subsidies will improve the integrity of the tax system and of economic policy, even if they have a slight negative effect on capital inflows. Unfortunately, regulators have offset the benefits of these steps by tightening restrictions on majority or even minority ownership of foreign acquisitions in the financial services industry and by regulatory delays in approving such acquisitions. Regulators have also cracked down on capital inflows that have come from inflated invoicing of exports, forcing more rapid and exact documentation to convert dollar receipts into renminbi. Making foreign investment subject to changing and arbitrary rules, as well as limiting the potential for control of domestic financial firms severely diminishes the attraction of investing in China.

probably turning net inflows into net outflows. Such a reduction in the foreign exchange build-up would reduce asset growth at the People's Bank of China, and the associated pressure on the money supply and inflation.

Under current Chinese monetary and financial policy, the People's Bank of China has attempted to insulate monetary growth from the increase in foreign exchange by raising reserve requirements at banks. In effect, the People's Bank increased bank reserves by buying up the dollars coming into the country and then raised reserve requirements so that banks would have to hold these reserves instead of being able to lend them out, expanding credit and deposits. Of course, the reserve requirement increases were not fully offsetting so that money, credit and inflation have accelerated in the past several years despite these efforts. Reserve requirements at large Chinese banks have been raised steadily since July 2006 when the reserve ratio was 8 percent, to more than double that burden, 17.5 percent in June 2007. Such increases substantially affect the cost, efficiency, competitiveness and profitability of domestic banks. For every yuan of deposits, banks now must hold 0.175 yuan in non-interest-bearing reserves and are able to cover the interest and other costs of these deposits by lending out the remaining 0.825 yuan. These increases in reserve requirements have left Chinese banks with reserve requirement costs that are among the highest in the world, despite a global trend toward reducing or eliminating reserve requirements in order to boost international competitiveness among banks.

Associated with the restrictions on financial markets, Chinese monetary authorities also limit the interest rates that banks can pay depositors and that they can charge on loans. In April 2006, before the central bank began to attempt to restrain the growth of money and credit, banks could pay 2.25 percent on deposits and could not charge more than 5.31 percent on loans. Both of these rates were higher than the 1.2 percent inflation rate over the previous year. As reserve requirements rose, reducing banks spreads or margins on loans, and as inflation rose, monetary authorities raised both rates, but raised deposit rates by less and both rates by less than inflation rose. By December 2007, the lending rate had been raised to 7.47 percent, while the rate paid to depositors had risen to 4.14 percent, with the latter substantially below the inflation rate of 6.5 percent. Inflation accelerated in 2008, further reducing the negative real rate earned by depositors and reducing the real lending rate to negative territory. Banks lost profitability due to these changes, and depositors lose as well. If borrowers can obtain credit, they face negative real interest rates, but in a regulated environment such as this one, interest rates cannot be used to allocate credit and so scarce credit does not go to its highest valued social use.

In this environment, harmonious workings of financial markets become less likely. Savers are exploited by a financial system that offers negative returns and no access to higher yield opportunities domestically or abroad, firms face credit rationed by criteria other than interest rates or profitability of the use of scarce credit and banks are caught in the middle, earning lower returns and higher costs than their competitors abroad or other domestic business. The inefficiencies and waste of resources that are created by all of these regulations and inflation have been characterized as repressed financial markets and

such markets are a major obstacle to growth.⁸ Lifting restrictions on capital outflows would end the circumstances (growth of foreign exchange reserves, money, credit and inflation) that have given rise to the more extensive repression of financial markets in China.

Allowing greater freedom for domestic investors to diversify wealth portfolios by investing abroad would reduce the problems that Chinese imbalances create for China. It would push the capital account balance toward deficit. It would also reduce the size and growth of China's huge holding of foreign exchange in low return U.S. government securities. It would also raise returns on Chinese wealth, reduce risk, improve the financial system and ease the pressures on the exchange rate, monetary policy and inflation. Increasing Chinese private capital outflows would also switch the accumulation of foreign exchange assets in the U.S. to private financial assets. In one sense this is simply switching the composition of assets from U.S. government securities to stocks, bonds, and bank deposits in the U.S. However, this diversification benefits the U.S. by reducing the concentration of exposures to China. It also would put upward pressure on the U.S. dollar because the asset demands of China would be desired portfolio or direct investments instead of residual purchases arising from excessive dollar flows into China.

Capital outflows from a country are aimed at improving the rate of return on domestic wealth and/or reducing risk of these returns, sometimes simply through diversification, or from relatively attractive profit opportunities. Domestic business can expand markets and access to foreign resources through direct investment abroad. Exposure to foreign markets increases productivity of domestic firms because of exposure to more demanding and more diverse markets abroad and because of new knowledge and capabilities of foreign technology and resources. In the case of the domestic financial market, international capital outflows provide significant competition, providing opportunities for upgrading productivity, rates of return and risk reduction through better products or better processes for management of domestic resources. Outflows of capital for foreign portfolio investment are imports of capital and act in much the same way as imports of goods and services in terms of influencing competitive pressures, offering new products and technologies and new ideas of how to better serve domestic financial customers.

One of the biggest development problems facing China is upgrading its financial system and making it globally competitive.⁹ China's outstanding growth record stands in marked contrast to its largely state-owned, failed financial institutions. While most analysts argue that China is the exception, it is not. The same arguments have been made in other more open Asian economies (see Rohwer 1998); the evidence suggests that

⁸ See Beim and Calomiris (2001) for an extended discussion of the conditions and effects of repressed financial markets.

⁹ Demirguc-Kunt and Levine (2008b) provide a detailed review of the literature on the finance-growth linkage and they provide new evidence that government policies have significant effects on the operations of the financial system and on access to financial services by large segments of the population. Their review shows that "The services provided by the financial system exert a first-order impact on long-run economic growth." (p. 2).

Asian growth success has come despite the backward financial markets, which held back even greater growth.¹⁰ Chinese government recapitalization of large banks in recent years yielded well-capitalized state-majority owned banking firms, but without directly addressing the incentive problems of state-owned companies and the institutional framework that led to the predominance of policy lending by domestic banks and the pattern of insolvent banks. China has entered a brief window of opportunity in which to make the banking system efficient and competitive before the earlier problems of insolvency and inefficiency return. Increased competition from internationally competitive banks is the most direct route to achieving the desired high quality, sustainably profitable financial institutions.¹¹

China has a captive financial market because of restrictions on capital outflows. Investors have essentially three options for unusually high saving: saving at highly regulated banks at extremely low rates of interest or investing in their own proprietary firms, or investing in asset accumulation at home, especially in housing, but again restrictions on financing put this option out of the reach of typical households. Investing in entrepreneurial activity is the most risky option, but given the incredibly low rate of interest payable at banks, this is an attractive option. Even before the explosion of foreign exchange, money, credit and inflation, and the consequent steps to offset some of these problems by reserve requirement changes detailed above, onerous restrictions on bank pricing created political and business incentives that restrained the growth of vibrant and competitive financial markets. Opening capital outflows would create new wealth creation opportunities for investors, banks, business, and government, and it would create strong pressures from all of these groups, especially banks initially damaged by enhanced competition, to reduce excessive regulation of banks and to develop a profitable and competitive sector. By enhancing the performance of the financial system, such a policy would reduce inequality and reduce poverty.¹²

There has been some progress on this front, especially for direct investment. But the few notable steps prove that these are exceptional. In 2008, the most prominent direct outflows from China to the U.S. have been the approval of New York branches for China Construction Bank and, on August 5, 2008, for the Industrial and Commercial Bank of China. The latter is the biggest bank in China and it is 74.8 percent owned by the People's Republic of China. China Aluminum Company (Chinalco) acquired almost 15 percent of Rio Tinto, the Australian mining firm, in February 2008 for almost \$15 billion

¹⁰Some analysts argue that Asia, or at least China, is the exception to the rule that the quality of financial institutions is a critical determinant of economic growth and development. Maksimovic, Demirguc-Kunt and Ayyagari (2008) find evidence that formal financial institution finance is associated with faster firm growth, but funds raised from alternative channels is not. Moreover, they find that this result is not due to the selection process for firms that have access to formal financial institutions.

¹¹ Porter (1998) emphasized the role of competition in open goods markets for upgrading the competitiveness of domestic enterprise and boosting economic growth. In the case of financial services firms, such improved competitiveness will arise through the import of capital from abroad.

¹² Demirguc-Kunt and Levine (2008a) provide evidence that the more developed the financial system is the lower is income inequality and poverty and the greater is access by low income households to financial services.

and proposed to acquire 11 percent more in August 2008. Haier was rumored in the financial press to be acquiring GE's small appliance division and Lenovo is rumored to be acquiring the remainder of IBM's consumer products division.

Earlier notable Chinese investments in the U.S. include Lenovo's acquisition of IBM's laptop business, Haier's opening of a U.S. headquarters and sales operation for small consumer appliances, and, until its July 2008 sale to its partner Cleveland Cliffs, United Mining Company's, a subsidiary of Chinese steelmaker Laiwu, 30 percent ownership of United Taconite. In Indiana, China International Marine Containers (Group) Co. Limited (CIMC) owns Vanguard National Trailer Corporation, the fastest growing trailer manufacturer in North America; the company is located in Monon, Indiana. Of course there are other Chinese companies in the U.S., but the list is not long. In one sense, it is very impressive that there is direct investment from China in the U.S.; other emerging markets are more focused on developing their own business sector and do not expect to have profitable opportunities from expanding abroad.

The greater opportunity for deregulation of the capital account would come from allowing investors to access financial assets abroad, either directly or through lifting of restrictions on Chinese financial firms offerings of foreign financial assets. In August 2007, China surprised markets by allowing private citizens open access to investment in the Hong Kong equity market. This had a large impact on outflows from the mainland to the Special Administrative Region. This action, referred to as the "through train" policy, was halted in November 2007, but not before Hong Kong's Hang Seng index rose 55 percent. It is unclear when this outlet will resume. But full liberalization would likely make a huge dent in China's stock of international reserves over time and it would ease pressures on the yuan, the U.S. dollar, China's inflation and risks to the international financial system. Moreover, allowing full access to foreign assets through mainland firms would greatly boost the banking system's competition and lead more directly to improvement in the competitiveness of China's financial industry.

IV. Summary and Conclusions

China and the U.S. have been at the heart of global discussions of international imbalances in economic relations. China has three major imbalances: a trade surplus, a capital account surplus and a large annual build-up, and very high level, of international reserves. The U.S. is widely criticized for having a comparable trade deficit that mirrors, to a large extent, China's surplus. Moreover, foreign central banks, with the People's Bank of China being the leader, have a large annual growth in holdings of U.S. government securities, which they hold as foreign exchange reserves. The U.S. has a strong positive balance in its capital account, representing the strong attraction of the U.S. as an investment destination, even when foreign central bank acquisitions of U.S. government securities are excluded. In large part, the attention to the bilateral relations of the U.S. and China are due to the central role that the dollar has played in China's exchange rate system; the renminbi was pegged to the U.S. dollar as the anchor for Chinese monetary policy from 1994 to 2005 and has remained the key currency in its managed float since then. But the other reason for attention to this bilateral relation is

political and business concern that China's exports are responsible for U.S. imports and for the trade imbalances in both countries.

Capital flows, especially flows of U.S. government securities, are also important in assessing the bilateral and overall imbalances in transactions for China and the U.S. What stands out here is that China has a capital account surplus to go along with its current account surplus, reinforcing its accumulation of foreign exchange reserves, mainly U.S. dollar-denominated assets. This is unusual for several reasons. Most important is that countries with large current account surpluses usually run deficits in their capital accounts, as excess foreign exchange that are not used to buy imports are used to purchase, on net, assets abroad. For example, Switzerland, which exports more relative to GDP and has a larger current account balance on this basis, runs a corresponding deficit in its capital account as relatively large domestic saving, capital inflows and large foreign exchange inflows on its current account are used to acquire assets abroad for its domestic and international investors. The reverse offsetting balance—a current account deficit and capital account surplus—observed in the U.S. It should be noted that this is a more “normal” pattern for a rapidly growing merging market economy—a current account deficit and a capital surplus, because such countries demand superior quality foreign resources, materials and capital goods to expand capacity and hence they have current account deficits, and they also offer global investors relatively high rates of return so that the country will attract net foreign investment from abroad. Some of China's major competitors had such a pattern before the Asian crisis in 1997-98, but their increased sensitivity to a reversal of capital inflows has led them to pursue slower growth and to run surpluses in trade and continuing outflows of capital, on net. China's special circumstances have allowed the authorities to indulge an even stronger sense of security by building reserves that even some of their Asian competitors could not afford.

There are significant consequences of the Chinese and the U.S. imbalances. In the U.S.' case, there is political pressure for protectionism and for China to implement wasteful economic policies to reduce their surpluses and to reduce their exports to the U.S. The expansion of foreign holding of dollar foreign exchange has raised the risk of U.S. exposure to foreign central banks and financial market shocks abroad. The U.S. problem, perhaps because of its more decentralized trade and financial system, is already adjusting to these imbalances as the current account deficit began to decline in 2005 and the dollar has fallen dramatically, on average, against all trading partners. Unfortunately, a good part of these adverse developments have, and will in the future, come from political pressures to raise taxes, especially on income from capital resources and from more protectionist policies, both of which are slowing growth in the U.S.

In China's case, the worst consequences of imbalances have been the results of the build-up of large, low-return foreign exchange that has actually had negative returns since the managed float began in 2005. These reserves have led to rapid growth in money and credit and, in turn, to a sharp acceleration in inflation, something that China had assiduously avoided since 1994 and that has raised serious doubts about the credibility of the monetary authorities and damaged their inflation-fighting reputation. Moreover,

efforts to offset money growth and inflation have exposed and deepened existing inefficiencies in the financial system, which China had hoped to begin remedying by its efforts to recapitalize and list its banks' equities on stock exchanges.

China could attempt to eliminate these imbalances by restricting its openness or subsidizing imports, but such policies would reduce growth. Ironically, Chinese policymakers could boost growth and aim to increase consumer and business demand for imports, but this too would lead to costly resource misallocations and would be challenged by greater foreign investment inflows. China could also try to limit capital inflows, but this would restrict the ability to import technology, organizational and other human capital that accompanies foreign investment. Limiting portfolio inflows would reduce the efficiency and liquidity of financial markets, raising the cost of scarce capital resources.

The most obvious solution proposed here is to lift restrictions on capital outflows, allowing households and business to diversify their wealth holdings to realize higher returns and/or less volatility in their own income and wealth. This would soak up excess foreign exchange and transform future asset growth from massive central bank holdings of U.S. government securities to holdings of more attractive assets in the U.S. or elsewhere. Such a step would eliminate the pressures on the People's Bank of China, allowing for more rapid deregulation of banks, slower money and credit growth and slower inflation.

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