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The Inflexible Yuan and Global Imbalances

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Anthony J. Makin

Abstract

This paper evaluates China's exchange rate policy and current account surplus in the context of its rapid development. Recognizing that external imbalances reflect divergent national production and expenditure growth within both China and its trading partners, it contends that yuan exchange rate undervaluation against major currencies is central to any explanation of global imbalances. This misalignment artificially assists China's output growth and limits its household consumption, thereby slowing the rise in China's living standards. Meanwhile, due to currency misalignment, China's industrialized trading partners, most notably the United States and European Union, simultaneously experience larger bilateral current account deficits with China, lower output, lower saving and higher investment than otherwise. Further significant appreciation of China's exchange rate would simultaneously reduce China's huge trade surplus and the bilateral deficits of its trading partners, thereby alleviating international trade tensions.

KEYWORDS: China's exchange rate policy, global current account imbalances

I. Introduction

China's remarkable integration into the world economy is the result of its international merchandise trade expanding at an annual average of 15 per cent over the past quarter century, more than double the global rate. This trade growth has occurred in the context of astounding average annual real GDP growth of near 10 per cent over this time, the legacy of economic reforms begun by leader Deng Xiaoping.

Since 2000 China's export growth has outpaced import growth giving rise to escalating trade and current account surpluses. China's current account surplus, at a record 11 per cent of GDP (Asian Development Bank 2008), has become a major point of contention between China and its industrial economy trading partners, especially the United States (US) and European Union (EU) members experiencing bilateral trade deficits with China. These global imbalances have also generated intense academic debate about the significance of the role played by China's inflexible exchange rate, particularly against the United States dollar.

In a recent issue of this journal, Tatom (2007) argued that nominal yuan exchange rate undervaluation is not a cause for concern and that the real exchange will revert over time to its long run mean via a purchasing power parity (PPP) mechanism that causes price levels to adjust. In response, Oberpriller, Sauer and Sell (2008) have countered that significant yuan undervaluation is evident due to the massive accumulation of foreign reserves over recent years by China's central bank, the Peoples Bank of China (PBC), and that nominal appreciation of the currency is warranted.

In what follows, this paper focuses mainly on the trade imbalance dimension of this critical global issue. It contributes yet another perspective by proposing that China's persistent trade surpluses and the counterpart bilateral deficits with industrialized trading partners have resulted from fixing the exchange rate in the face of discrepant output and expenditure growth. Contrary to Tatom (2007), it argues that nominal yuan undervaluation is a problem and that real exchange rate appreciation will not necessarily occur automatically if successfully countered by monetary policy.

While agreeing with Oberpriller *et al* (2008) on the need for a significant nominal appreciation of the yuan, the paper further advances our understanding by elaborating the monetary consequences of China's present exchange rate policy and by highlighting the downside of the inflexible yuan for Chinese living standards and manufacturing production in China's industrialized trading partners.

The external imbalance between China and its trading partners has mostly been interpreted as an international macroeconomic phenomenon, based on differences in respective aggregate saving and investment behavior (see IMF

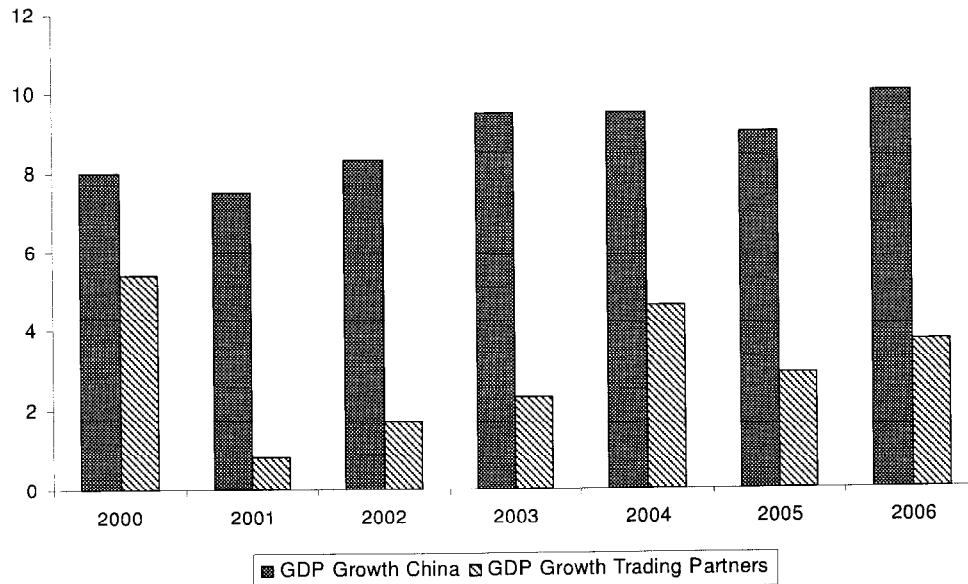
2007). On this basis, the theoretical economics literature presents a strong case for free international trade in saving, implying external imbalances should not necessarily be a policy concern (see, *inter alia*, Frenkel and Razin 1996 and Makin 2003).

Indeed, intertemporal models of external account determination suggest that current account imbalances and associated external borrowing and lending *per se* improve macroeconomic welfare by raising consumption possibilities through time for both lender and borrower economies. However, intertemporal models assume high private capital mobility, individualistic optimizing saving and investment behavior and generally ignore central banks and exchange rate management, which is not realistic when considering China. For this reason, any examination of the main factors contributing to China's external imbalance should start with a focus on its trade flows.

This paper first highlights key features of China's remarkable growth and trade performance as background for interpreting the implications of its exchange rate policy for China itself and for its industrialized trading partners. It then proposes that the inflexible yuan sustains trade imbalances under conditions where China's economic growth rate is a multiple of its trading partners' and where private capital mobility remains highly restricted. Next, it examines how monetary policy to date has managed to nullify automatic adjustment of real exchange rates and trade imbalances by minimizing expenditure growth and inflation. In conclusion, it proposes further trade-related reasons for allowing greater yuan exchange rate appreciation that co-incide with China's economic interests.

II. China's Growth and Trade

China's economic strength follows a quarter century of growth at an annual average of 9-10 per cent, some three times higher than the average rate of its trading partners (see Chart 1). Although other East Asian economies, including Japan, South Korea, Malaysia and Thailand and the oil exporting countries have also run sizeable trade surpluses with industrial trading partners since 2000, China's surplus has attracted most international policy attention because it has risen so sharply against a backdrop of rapid economic growth and a tightly managed exchange rate.



Source: Based on data in IMF (2006)

Chart 1 - Economic Growth in China and Trading Partners

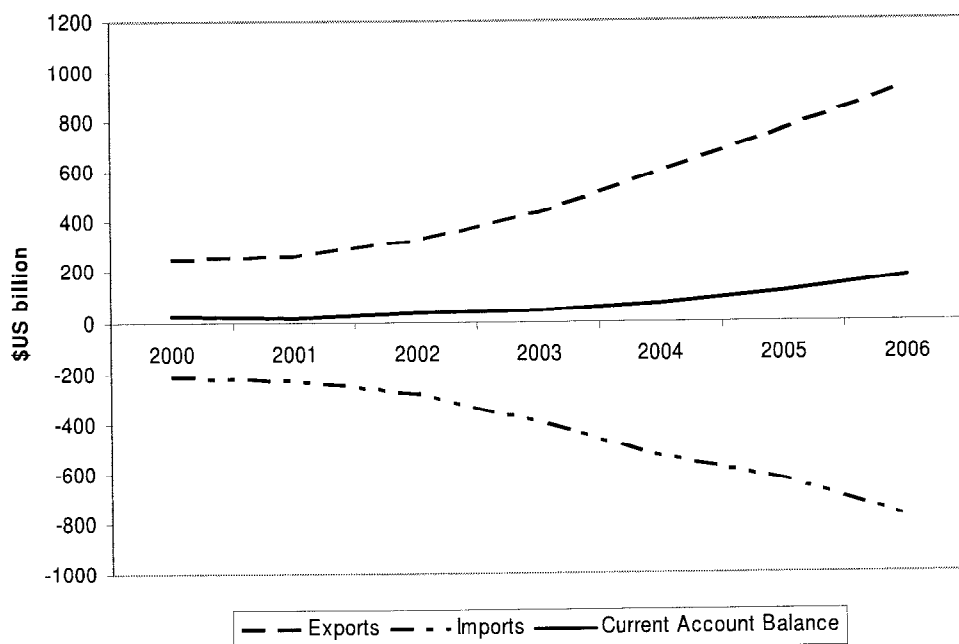
China's growth stems from a series of economic reforms which continued in several distinct phases through the 1980's, 1990's and to the present. (See Herd and Dougherty 2005 and OECD 2005 for related discussion). Encouragement of foreign direct investment, greater labour mobility, higher saving due to contraction of social welfare entitlements previously extended by the state sector, and an improved investment climate for the private sector with less corruption have been key factors underpinning China's output expansion.

The broadened capital stock resulting from high saving and investment has been combined with an urban workforce that has surged as controls over internal migration between rural to urban areas eased from the mid 1990's. A new managerial class has also emerged to start up predominately manufacturing enterprises and restructure privatised and reformed state-owned enterprises. Meanwhile, the labour force is far better educated than before.

Relative to the structure of advanced industrial economies, China has a large tradable sector and small non-tradable sector. As a percentage of GDP, its total exports plus imports of goods and services (at near 75 per cent) is well above comparable openness measures for the United States, Japan and Germany. The tradable sector is also disproportionately large compared to other sizeable emerging countries at similar stages of development, such as Brazil. This is in part due to official encouragement of manufacturing over services production.

Following China's accession to the World Trade Organization (WTO) in 2001, the liberalisation of international trade barriers has significantly boosted its exports by more than its imports, although high export growth (comparable to Japan's and South Korea's during their post-war take-off phases) was evident even before China joined the WTO. Policies that have encouraged foreign direct investment have also greatly assisted exports by multinational firms (such as Motorola, Toshiba, Nokia and LG) operating in coastal China (Hale 2006).

China's external account surplus essentially reflects its trade surplus (see Chart 2) with the difference between the trade and overall current account surplus due mainly foreign interest income earned on the massive international reserves of the central bank. As China's current account balance essentially reflects its trade balance, the two terms are used interchangeably in subsequent discussion.



Source: Based on data in IMF

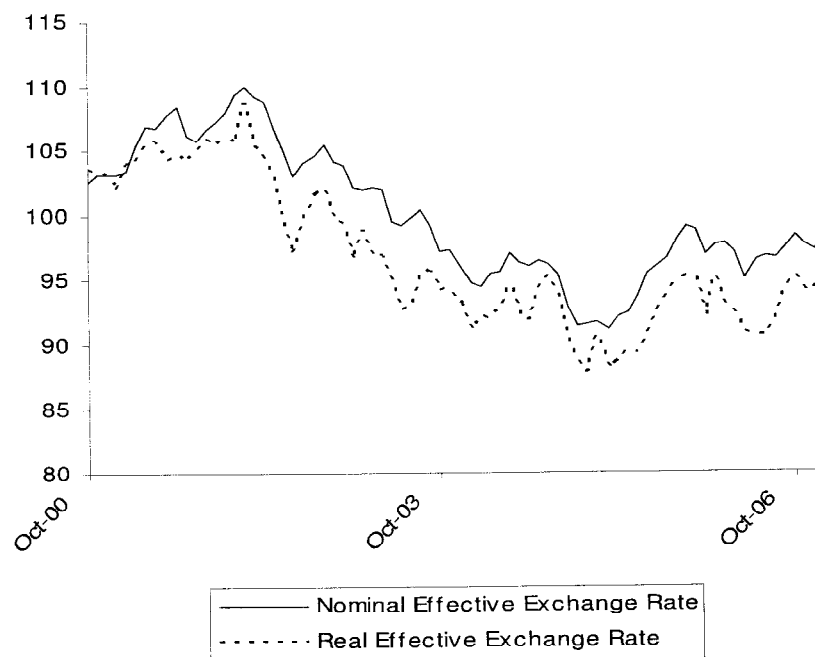
(2006)

Chart 2 - China's Exports, Imports and Current Account Surplus

Persistent trade surpluses and capital inflow (in the form of foreign direct investment and speculative inflows that circumvent official capital controls) have enabled the PBC to amass a huge stock of foreign exchange reserves, much in the form of US government securities. Meanwhile, extensive capital controls still impede private financial capital outflows, such that recorded non-official capital outflows remain negligible.

Maintaining a relatively inflexible exchange rate that has appreciated only minimally in nominal effective and real terms over recent years has resulted in China's foreign exchange reserves reaching over \$1.8 trillion in 2008, the highest of any economy in the world. The inflexibility of China's exchange rate contrasts with the prevalence of more flexible exchange rate regimes adopted by the majority of developing and emerging economies (Rogoff et al 2004) with which industrial economies trade.

The inflexible yuan has sustained strong competitiveness and minimised exchange rate uncertainty for the large manufacturing-oriented tradable sector, thereby assisting China's export growth. This is reflected in its real exchange rate which, as evident from Chart 3, has been significantly undervalued relative to its value in 2001 when China joined the WTO, over which time its external surplus has risen most sharply. Moreover, it is obvious from the close co-movement of nominal and real effective exchange rates that nominal exchange rate fluctuation has dominated relative price level variation and is the key source of China's strong competitiveness.



Source: Based on data from BIS (2007)

Chart 3 – Exchange Rate Competitiveness since WTO Accession

III. How an Inflexible Yuan Widens Trade Imbalances

China's rapid manufacturing-driven development has resulted in domestic output growth outpacing domestic expenditure growth, or equivalently export growth exceeding import growth. When exports (inclusive of the output of multinational corporations producing for export) grow relatively faster than imports, China's trade and current account surplus increases which, other things equal, should appreciate the yuan and depreciate exchange rates of trading partners against the yuan. However, current exchange rate policy has prevented such appreciation from happening.

To avoid the loss of competitiveness that nominal exchange rate appreciation would entail, the People's Bank of China (PBC) has instead purchased foreign currency which, in large part, has been invested in foreign Treasury bonds that are added to international reserves. While exchange of yuan for foreign currency reduces the money supply of its Western trading partners, other things equal, subsequent purchase of foreign currency denominated bonds with the foreign currency acquired by the PBC leaves foreign money supplies unchanged.

Meanwhile, excess demand for trading partner bonds pushes up their price, lowering bond yields abroad. In turn, these lower interest rates sustain higher expenditure than otherwise in trading partner economies. Consequently, public capital outflow from China, the result of central bank intervention, ensures its external surplus matches the capital inflow and external deficit of trading partners.

When the PBC buys trading partner bonds with the proceeds of its exchange rate management, it effectively generates the excess Chinese saving over investment to fund excess investment over saving in its trading partners. Capital inflow to trading partners (public capital outflow from China) has thereby lowered global long term interest rates which have also enabled total expenditure, inclusive of imports, to exceed output in industrialized trading partners. China's national income is subsequently augmented by interest income on the PBC's foreign reserves, whereas trading partners' national income is reduced by interest paid the PBC on these reserves.

Since China accumulates foreign currency reserves via trade surpluses that arise at a pegged exchange rate, the external deficits of trading partners (especially that of the United States since the dollar is the main reserve currency) are partly Made in China, courtesy of the PBC's exchange rate policy. On the contrary, if the yuan was free to move against trading partner currencies, other things equal, it would appreciate, automatically ensuring that bilateral trade accounts would tend to balance. In other words, by pegging the yuan China's exports are higher and its imports lower than had the PBC allowed the yuan to appreciate. In this light, the inflexible yuan may be seen as conferring a form of

trade protection to its domestic manufacturing industry, including the manufacturing output of multinational enterprises exporting from China. Such assistance can be termed "exchange rate protection." (See also Schwartz 2005).

Despite China's rapid output growth, its inflexible exchange rate also results in domestic consumption being lower than otherwise because the undervalued exchange rate curbs China's imports of consumer goods. In turn, this implies China's living standards, as gauged by the level of consumption households enjoy, is sub-optimal. Meanwhile, in advanced trading partner economies a pegged yuan leads to larger trade and current account deficits than otherwise and results in tradables sector output and employment in industrial countries (especially in manufacturing sectors) being lower than if the yuan exchange rate was more flexible.

Significant exchange rate realignment would therefore have major real sector consequences for both China and its trading partners. Trading partner manufacturing output would rise and both domestic consumption and investment spending (inclusive of imports) in trading partners would fall such that current accounts between China and its trading partners would tend to rebalance. With lower consumption and higher output in trading partner economies, domestic saving rates would also rise unambiguously and investment fall to ensure saving-investment equality consistent with current account balance.

IV. The Monetary Consequences of Pegging the Yuan

From China's perspective, apart from assisting the competitiveness of export and import competing industries (including the large and politically sensitive agricultural sector), an undervalued exchange rate is most likely thought by the authorities to bestow other economic benefits.

For instance, the PBC's huge stock of international reserves provides a reservoir of funds with which to defend the yuan in the event of a crisis such as the Asian currency and financial crisis that hit the region in 1997-98. Relatedly, the inflexible yuan provides a measure of stability for China's banking and financial system. Many other emerging economies favor pegged exchange rates for these reasons as well. (See Hausmann, Panizza and Stein, 2000, Calvo and Reinhart, 2002 for related discussion.)

Yet, central bank purchases of foreign exchange, mostly US dollars, to peg the exchange rate have major monetary consequences. In particular, intervention to prevent nominal currency appreciation increases China's money supply which would, in the absence of offsetting monetary action, raise aggregate expenditure (including spending on imports) and domestic inflation. In theory, this higher inflation would bring about automatic correction of the real exchange rate and of the excess of exports over imports. Not only would this tend to correct real

exchange rate undervaluation, but also rebalance the trade account.

While real exchange rates do tend to revert to their mean values over the longer term, as Tatom (2007) correctly reminds us, it is also true that major deviations from purchasing power parity equilibrium, as reflected in real exchange rate under or over-valuations occur over extended periods in the presence of real economic shocks. In China's case, the most significant real shock emanates from the surge in manufacturing output made possible by the mobilization of cheap labor from rural to industrializing areas in the country's east. This rise in aggregate production has exceeded the rise in domestic spending by households, firms and government and thereby allowed exports to grow faster than imports.

In practice, the classical automatic monetary adjustment mechanism under a fixed exchange rate system has been rendered inoperative for China and its trading partners because the PBC has sterilised foreign exchange market intervention by issuing local currency denominated debt instruments to offset the liquidity effects of the intervention. At the same time, the PBC has restricted credit expansion and money growth by raising the reserve requirement ratio of the banks, doubling it from a ratio of 7.5 per cent to 15.5 per cent in the first quarter of 2008, its highest level in decades (Asian Development Bank 2008).

Furthermore, money supply growth was not more inflationary between 2000 and 2007 because, as standard monetary theory suggests, the expanding money supply simultaneously accommodated real money demand increasing in line with rapid output growth. However, since late 2007 inflation has begun rising above the low levels of the first half of this decade and is expected to reach around 6 per cent in 2008.

Although higher inflation and real exchange rate appreciation would eventually act to restore external balance automatically by increasing imports and reducing exports, higher inflation and the need to rein it in via higher interest rates would also strain China's domestic banking system by exacerbating non-performing loans (Hale 2006).

The vulnerability of China's banking sector and the underdeveloped nature of the foreign exchange market and instruments for managing currency risk suggest that a more flexible exchange rate regime needs to be introduced stage-wise, beginning with an announcement by the central bank of a wider exchange rate band in which the daily value of the yuan could be set.

Allowing greater exchange rate flexibility would afford greater independence to monetary policy in China and directly abate inflationary pressures that have built as the monetary consequences of pegging the yuan become more difficult to manage. In addition, a more flexible exchange rate would better insulate China's economy from external shocks, such as further sharp rises in oil and other commodity import prices.

V. Implications for World Trade

With an inflexible exchange rate and limited private capital mobility, the larger China's trade surplus and reserves become, the more indicative this is of an undervalued yuan. If the yuan was more flexible, other things equal, higher exports from China, equal to higher imports for its trading partners, would appreciate its currency and depreciate the currencies of advanced trading partners on an effective basis.

China's undervalued exchange rate also means lower imports of consumer goods and services from abroad. Hence, China's standard of living, as measured by the level of consumption that average Chinese households enjoy, is lower than it could be. Meanwhile the opposite is the case in China's industrialized trading partners where household consumption is higher and short run output and employment in the tradable sector of these economies is lower, due to cheap Chinese imports.

Trade and current account imbalances between China and its Western trading partners are widely perceived as a trade competitiveness problem, especially at the manufacturing industry level, so much so that the large bilateral trade deficit with China has prompted proposed retaliatory action in the form of new tariffs against Chinese imports by US lawmakers (see Congressional Research Service 2008 for related discussion).

The International Monetary Fund (IMF 2007) has also expressed concerns that existing global current account imbalances pose risks for the world economy, especially the global imbalance between the US and East Asia. Accordingly, numerous measures, including nominal yuan appreciation, have been proposed in both the recent multilateral consultation on global imbalances promoted by the IMF and by US authorities on a bilateral basis with China.

In sum, allowing significant further yuan appreciation would reduce trade imbalances with China, alleviate international trade tensions and forestall enactment of commercial restrictions, such as higher tariffs on imports from China. Such restrictions would damage China's long term trade performance, consumer welfare in its trading partners, and the integrity of the international trading system at large.

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