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### **China and the United States after the crisis: a zero-sum battle for jobs and growth?**

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**Abstract:** Up until about 2005, the United States and China had a symbiotic relationship with respect to growth and employment. China exported exceedingly cheap labor-intensive goods to the United States and the world, and recycled its trade surpluses as credit to the American consumers buying those goods. Politically, cheap Chinese goods and lending enabled a job creating housing boom that ameliorated the increasingly unequal US income distribution. Equally so, exports generated political quiescence in China through expanded employment. Together, US and Chinese growth helped Germany, and thus Europe, grow. After 2005, China's growth became more capital intense and US homebuyers faced housing prices – and debt levels – completely detached from any plausible economic future. Relatively more capital intense Chinese exports also eroded US medium technology manufacturing in the US industrial heartland, rather than just labor intense manufacturing in the US internal periphery. Rising capital intensity also lowered employment growth inside China. This changed the symbiotic relationship into a zero-sum relationship, with Europe as the first victim. The paper presents cooperative and conflictual scenarios for the end game over the next decade.

## China and the United States after the crisis: A zero-sum battle for jobs and growth?

Once you start issuing \$ 1 - \$ 2 trillion (of US government bonds)... we know the dollar is going to depreciate, so we hate you guys, but there is nothing much we can do.

Chinese Finance Ministry official, 2009<sup>1</sup>

Mao Zedong famously said that political power grew out of the barrel of a gun. But how to pay for that gun? The financial crisis starting in 2007 drove the official US unemployment rate to levels that had not been seen since the early 1980s. Meanwhile China's economy, courtesy of a massive Keynesian stimulus, powered on with near double digit growth. These diverging trends provoked fears of terminal US decline that echoed similar fears in the 1970s and 1980s, when Europe and Japan also out-grew the United States. Equally so, China reveled in the kind of *schadenfreude* that Japan briefly enjoyed at the end of the 1980s. Are the United States and China locked into a zero sum conflict for employment and growth in the aftermath of the great recession? Does this conflict inevitably end with a margin call from Chinese bankers to an indebted United States? By the same token, is China destined for continued high speed growth and export success?

Up until about 2005, the United States and China had a positive sum, symbiotic – indeed “co-dependent” in the pop psychological sense – relationship with respect to growth and employment. China exported exceedingly cheap labor-intense goods to the United States and the world, and recycled its trade surpluses as credit to the American consumers buying those goods. Cheap Chinese goods and lending helped paper over an increasingly unequal income distribution in the United States by enabling a

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<sup>1</sup> Luo Ping, director-general at the China Banking Regulatory Commission, quoted in Henny Sender, “China to Stick with US Bonds,” *Financial Times*, 12 October 2009, accessed 12 October 2009, <http://www.ft.com/cms/s/0/a403d716-f8a6-11dd-aae8-000077b07658.html>.

job creating housing boom.<sup>2</sup> But from 2005 onward, China's growth became more capital intense and US homebuyers faced a market whose prices, and thus mortgage debts, were completely out of touch with any plausible economic future in which housing debt could be repaid. Relatively more capital intense Chinese exports also eroded medium technology manufacturing in the US industrial heartland, rather than just labor intense manufacturing in the US internal periphery. The US-China relationship became zero-sum rather than positive sum. What caused this change and what lies ahead?

This paper answers these questions in four steps. Part one discusses the incomplete and misleading conventional wisdom on the US-China relationship, which focuses on the unbalanced bilateral US-Chinese balance sheet. Part two discusses the co-dependent growth dynamic prevailing from the mid-1990s until 2005, presenting a stylized model of growth for each country. Part three shows how co-dependent growth created internal contradictions that shifted these growth models into something closer to a zero sum relationship after 2007. In other words, a contradiction emerged from the dialectical relationship between the US and China. Part four discusses the current state of play, asking which country has a more decisive final move. This section is necessarily speculative, but suggests that the United States, as a debtor and deficit country in relation to China, not only retains a decisive power to make the last move in any economic conflict but has made tentative steps towards exercising that option. This is why part one finds the conventional wisdom wanting.

### *1: Chinese bankers, American debtors*

On 10 October 2010, the conservative pressure group Citizens Against Government Waste released a video ad titled "Chinese Professor" that instantly went viral on youtube.com.<sup>3</sup> The ad showed a Chinese professor in 2030 explaining the decline and fall of a series of empires. The United States, he

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<sup>2</sup> Herman Schwartz, *Subprime Nation: American Power, Global Capital and the Housing Bubble* (Ithaca, NY: Cornell University Press, 2009).

<sup>3</sup> The video can be found at <http://www.youtube.com/watch?v=OTSQozWP-rM>.

said, had crippled itself by trying to tax and spend itself out of a great recession. The video ends, “Of course we owned all their debt, so now they work for us.” Putting aside its partisan animus, the video captures the essence of the conventional wisdom on the US-China relationship c. 2010. This wisdom rested on the following claims. China’s massive holdings of US Treasury, Agency and private debt put China’s hand around America’s throat. Having underwritten US fiscal and trade deficits for years, China now had a geo-political lever to move the heretofore immovable American earth.

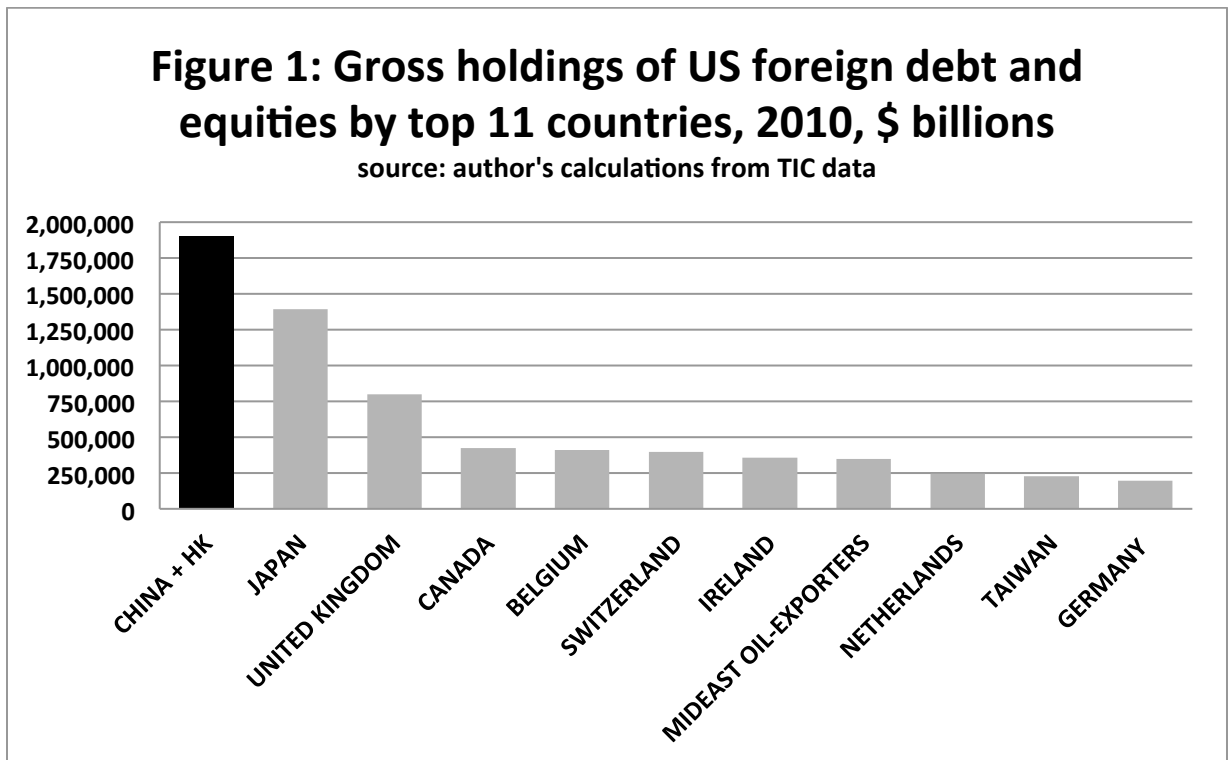
And indeed, a forensic analysis of the cumulative US trade deficit on goods from 1999 to 2010 shows that roughly 29 percent – or nearly \$2.1 trillion – of the cumulative \$7.3 trillion US deficit accrued to China.<sup>4</sup> Furthermore, China accounted for 18 percent of all current account outflows attributable to income payments on government debt, although only 5 percent of all income outflows. This bilateral trade deficit is the origin of the roughly \$2 trillion of various US debt instruments the Chinese state held as of June 2010. Even without adding in Hong Kong’s holdings – and they should be added in – China’s holdings are out of proportion to the size of its economy relative to the world economy, the US economy, or indeed a wide range of developed economies. On a net basis this would be even more evident. Figure 1 shows gross holdings of US foreign debt and equities by country (excluding tax havens but including Switzerland) as of 2010. Figure 2 shows the same data relative to shares of global GDP.

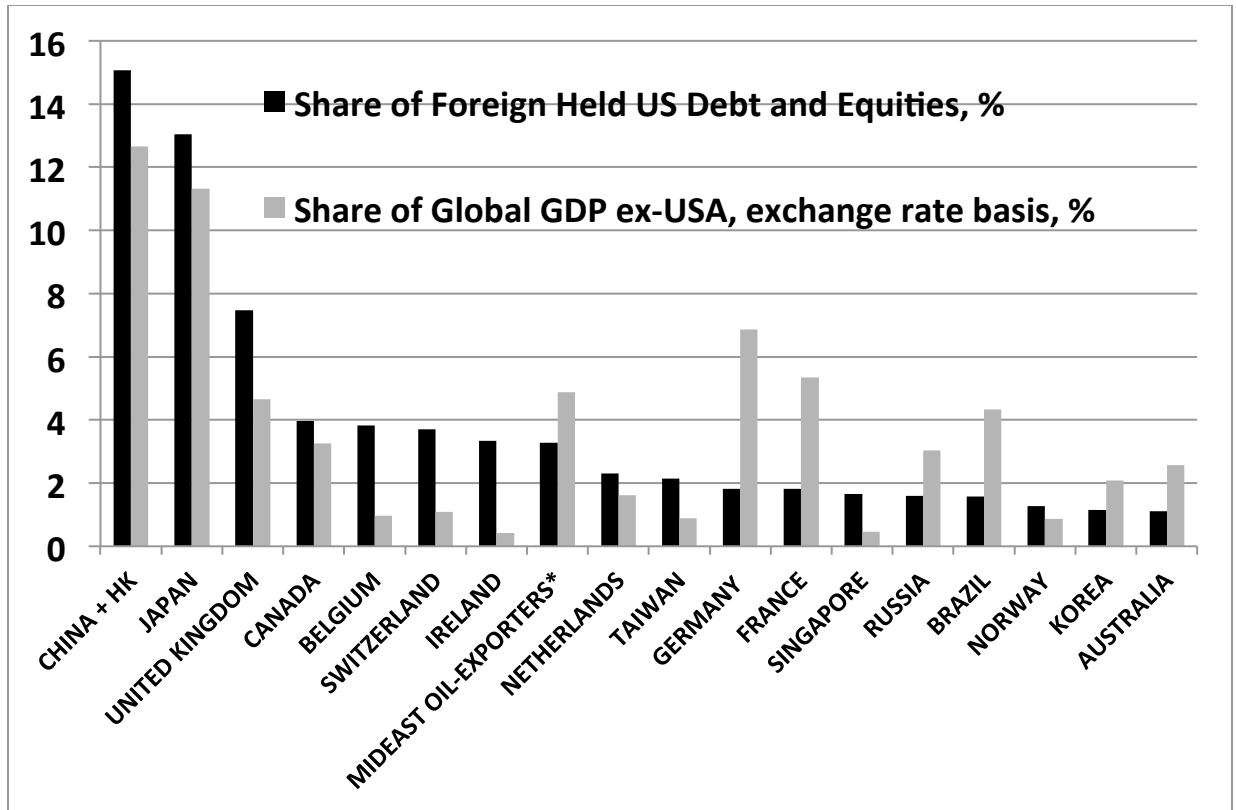
But do these holdings convey power? Are Americans, as a US Senator, Jim Demint (R-SC), charmingly put it, “on our knees in front of China for credit”? A similar debate erupted over what were then perceived as outsized Japanese holdings of US Treasury and other debt in the late 1980s and 1990s. Then, as now, two distinct lines of argument emerged, one based on stocks and one based on flows. First, critics argued that Japan or China might make a concerted effort to reduce their stock of Treasury Bonds by selling significant portion of those holdings. This would drive down the value of the dollar to

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<sup>4</sup> All data in this paragraph are author’s calculations from Bureau of Economic Analysis data at <http://www.bea.gov/international/index.htm>, downloaded 10 February 2011 and US Treasury TIC data at <http://www.treasury.gov/resource-center/data-chart-center/tic/Pages/fpis.aspx>, downloaded 15 September 2011.

the extent that either seller swapped proceeds into other currencies. It would also drive down the value of US Treasuries and related securities. As former Treasury Secretary Larry Summers noted, these kinds of sales would be much like a nuclear exchange, inflicting unacceptable levels of damage on both sides. While massive sales would damage the creditworthiness of the US government, they would also destroy the balance sheet of the People's Bank of China (PBoC), China's central bank. US Treasury and other US government bonds are the assets on the PBoC's balance sheet that match its equally large renminbi denominated liabilities. Panic selling of Treasuries that drove down both the dollar relative to the renminbi, as well as the market price for those Treasuries, would leave the PBoC with a huge uncompensated liability. Indeed, it would require a recapitalization of the central bank roughly equivalent to half of China's current GDP.





Second, in a much more likely scenario, critics alleged that the scale of Japanese or Chinese Treasury bond purchases made them the marginal buyer of Treasuries. On a flow basis, then, China's purchases might give it the ability to influence the interest rate on new issues of government debt. Chinese abstention from bond auctions would reduce demand relative to the supply of new debt, pushing up interest rates. The interest rate on US Treasuries sets the reference rate – the benchmark – for interest rates on virtually all other debt instruments in the United States. Thus rising interest rates on Treasuries not only would make it harder to fund the federal deficit, but also would also hurt everyone else attempting to fund consumption or investment by borrowing. Presumably, a sustained Chinese absence from bond auctions could bring about a recession.

Is this argument plausible? Econometric analyses suggest that recycling of Japanese and then Chinese trade surpluses as purchases of Treasury debt during the late 1990s and early 2000s depressed yields on 10 year US Treasury debt by about 90 basis points, or almost 1 percentage point, and as much



as 150 basis points in 2005.<sup>5</sup> This is a significant effect, albeit in the opposite direction. But it is not entirely clear that withdrawing demand rather than providing it would have the same effects. Higher Treasury bond rates might well attract inflows of money from elsewhere, driving rates back down again. Moreover, if China continued to run trade surpluses, sales of their excess dollars would probably flow back to the United States as other countries' purchases of Treasuries or goods and services. Either of these would mitigate the effects of a Chinese or Japanese buyer's strike at bond auctions. Neither Japan in the 1980s nor China today can credibly threaten to avoid Treasury auctions without also taking steps to reduce their trade surpluses.

This was evident in the one disrupted auction that did concentrate minds in Washington. China's refusal to buy more of Fannie Mae and Freddie Mac's debt issues in 2008 was followed by nationalization of the two US mortgage giants. Did China force this nationalization? Certainly it helped force the Treasury and Fed's hand in this matter, but as everyone was avoiding debt issued by the twin agencies, the blame cannot be laid solely at China's feet. Moreover, had Fannie and Freddie been solvent, a Chinese buyer's strike would have had effects much like those listed above. Finally, China's refusal to buy the Frannies' debt meant that it simultaneously increased its purchases of Treasuries.

If the conventional wisdom about what is central to the US-China relationship is wrong, what then is central? The answer is that the United States and China had a co-dependent relationship that promoted growth in both countries until 2005, but which then turned fratricidal.

## *2: Co-dependent growth*

From the mid-1990s until the mid-2000s the United States and China each had growth models promoting mutual growth, often to the detriment of third parties. This mutually beneficial interlock helps explain why China and the United States together accounted for 45 percent of total world growth

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<sup>5</sup> Francis E. Warnock and Veronica Cardac Warnock, "International Capital Flows and U.S. Interest Rates," Federal Reserve Bank International Finance Discussion Paper No. 840, September 2006.

on a purchasing power parity basis, and their combined share of global GDP increased from 32 percent to 36 percent, 1995-2006.<sup>6</sup> How did each growth model work?

### 2.1 *The US growth model*

The US growth model had two interlocked virtuous cycles that ran through its housing finance system. (See Figure 3.) The peculiarities of the US housing finance system translated falling nominal interest rates in the 1990s into additional consumption and growth much more effectively than the housing finance systems of continental Europe and Japan. The 1990s were a period of profound disinflation everywhere in the OECD. Unlike the 1970s and 1980s, long term *nominal* interest rates fell. Euro-area long term interest rates fell from 11.2 percent in 1990 to 3.5 percent by 2005. US long term rates similarly fell from 8.7 percent to 4.0 percent 1990-2003.<sup>7</sup> While real interest rates did not fall, studies show that housing prices are much more sensitive to nominal rates than real rates.<sup>8</sup>

#### **Figure 2: the US Growth Cycle, 1991-2005**

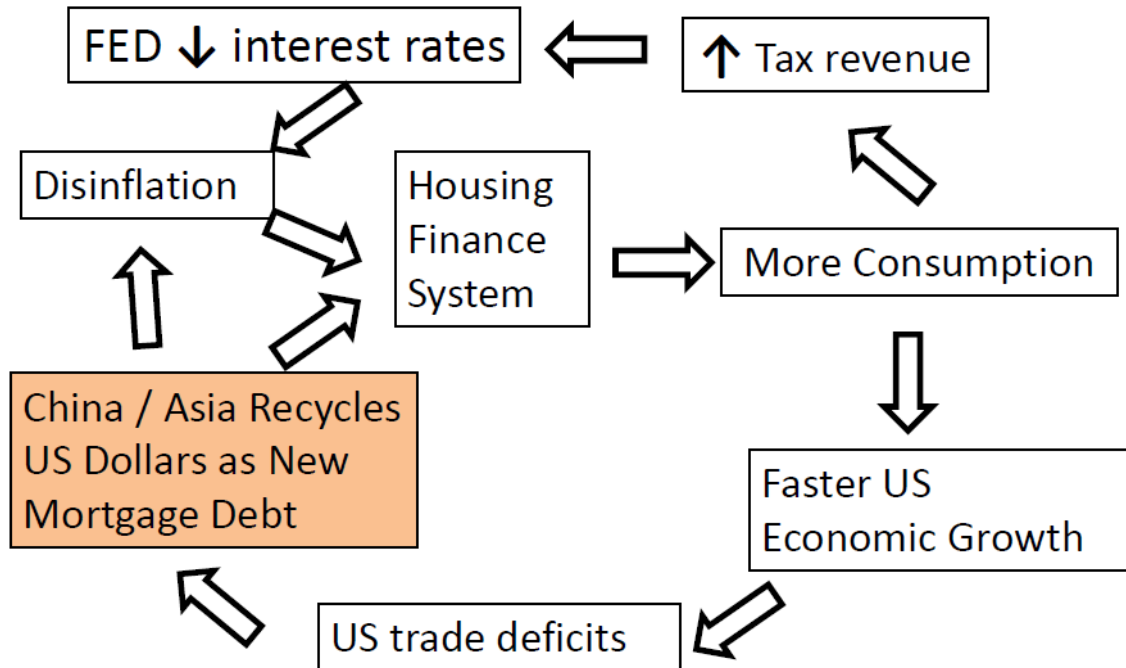
Source: Adapted from Schwartz, *Subprime Nation*, figure 1.1

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<sup>6</sup> International Monetary Fund, *World Economic Outlook Database*, accessed 15 September 2011, <http://www.imf.org/external/pubs/ft/weo/2011/01/weodata/download.aspx>.

<sup>7</sup> OECD, *OECD Factbook, 2005*, <http://www.sourceOECD.org>.

<sup>8</sup> Richard Green and Susan Wachter, "The Housing Finance Revolution," Federal Reserve Bank 31<sup>st</sup> Economic Policy Symposium, Jackson Hole, WY, August 2007, 9.



Disinflation potentially could have released new purchasing power into the hands of consumers and companies. Why didn't the global disinflation aided by the Clinton administration's conservative fiscal policy benefit all OECD economies equally? Not all debtors could use falling rates to reduce their interest payments and free up cash for other consumption. Corporate debtors with easy access to bond markets could refinance. But indebted consumers had varying abilities to reduce their interest rates and thus refresh their purchasing power. Moreover, consumers in OECD different countries had different levels of debt.

In the ideal case, the biggest Keynesian aggregate demand stimulus would occur where there were relatively high levels of private, individual homeownership financed through mortgages, and the financial system permitted cheap and easy refinance of those mortgages. All three conditions are true in the United States, which has high levels of private homeownership, high levels of mortgage debt in relation to GDP, and a very liquid housing finance market. By replacing high interest rate mortgages for lower interest ones, American consumers freed up considerable purchasing power. Moreover, American

homeowners have the ability to easily ‘cash out’ and spend their home equity – the positive difference between the home’s market value and the mortgage debt. In the 1990s, refinance and home equity extraction contributed a large portion of new GDP; from 2000 through 2007 they account for almost all US growth.<sup>9</sup>

China (and Japan) helped drive this cycle by recycling their trade surpluses into Treasury bonds and the Frannies’ debt. The 10 year Treasury bond rate sets the reference rate for mortgages, so Asian recycling helped push down mortgage rates and enable the refinancing-into-growth feedback loop to operate. But a second feedback loop also connected disinflation to US growth. China’s and Hong Kong’s share of US imports rose from 5.7 percent to 15 percent of total US imports, 1991 to 2005. China’s low wage labor provided an increasingly larger volume of low cost, imported consumer non-durable consumption in the United States. This magnified disinflationary pressures. By contrast, the share of US imports from high wage Japan shrank by almost the same 10 percentage points.<sup>10</sup> Finally, the Federal Reserve Bank (FED) reinforced both trends by steadily lowering short-term interest rates after 1995 as growth narrowed and then eliminated the fiscal deficit.

Politically, strong US growth and falling interest rates helped paper over the worsening distribution of income in the United States during this period.<sup>11</sup> Roughly speaking, to the extent that personal income increased, the top 20 percent of the income distribution, and within that the top 20 percent of the top 20 percent (i.e. the top 4 percent), captured most income gains. Ever lower interest rates allowed homeownership rates among the middle 30 percent of the income distribution to rise despite stagnant income, while cheaper consumer non-durables eased the burden for the bottom 30 percent of the income distribution. This debt fueled prosperity proved unsustainable, but in the medium

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<sup>9</sup> Alan Greenspan and James Kennedy, “Sources and Uses of Equity Extracted from Homes,” Federal Reserve Bank, FEDS Research Paper 2007-20, 2007, 43, 26, plus author’s calculations.

<sup>10</sup> Bureau of Economic Analysis data at <http://www.bea.gov>, “Table 2b: US Trade in goods.”

<sup>11</sup> Raghuram Rajan, *Fault Lines* (Princeton: Princeton University Press, 2010).

run it prevented a loss of legitimacy in the face of absolute income declines for the average male in the bottom quarter of the US labor force.

## 2.2 *China's growth cycle*

What about China? China's fundamental geo-political and domestic political problems both intersect around GDP growth. Absent robust GDP growth, China will be unable to transform roughly a billion poor peasants into moderate income city-dwellers. The Communist Party's legitimacy became particularly dependent on delivering growth after the 1989 Tiananmen crackdown. Equally so, China's external security (and any hope of recovering Taiwan Province) rests on transforming a backward economy into an industrial powerhouse. Yet efforts to privatize the many small state owned enterprises in pursuit of greater efficiency also put roughly 50 million additional workers back into the labor market from 1995 to 2004.<sup>12</sup> Finally, accumulating large foreign currency reserves would limit potential vulnerabilities to dependence on external raw materials. Moving up the value chain would allow it to produce its own weapons. Chinese growth had two strong feedback loops driving growth that intersected with those promoting US growth. (See Figure 4.)

Chinese growth began and remains largely domestically driven. The smashing of the iron rice bowl – the rudimentary welfare state that provided China's citizens with pensions, health, education and housing – created a huge surge in personal saving. Individuals and families had to rely on their own savings rather than their enterprise or municipality. Because China has a tightly controlled, state-owned financial system, politically unconnected households had only one option for those savings – bank accounts yielding low real and nominal interest rates. Low rates induced extremely high rates of saving to compensate for the slow accumulation of savings via compounding. Politically connected elites and

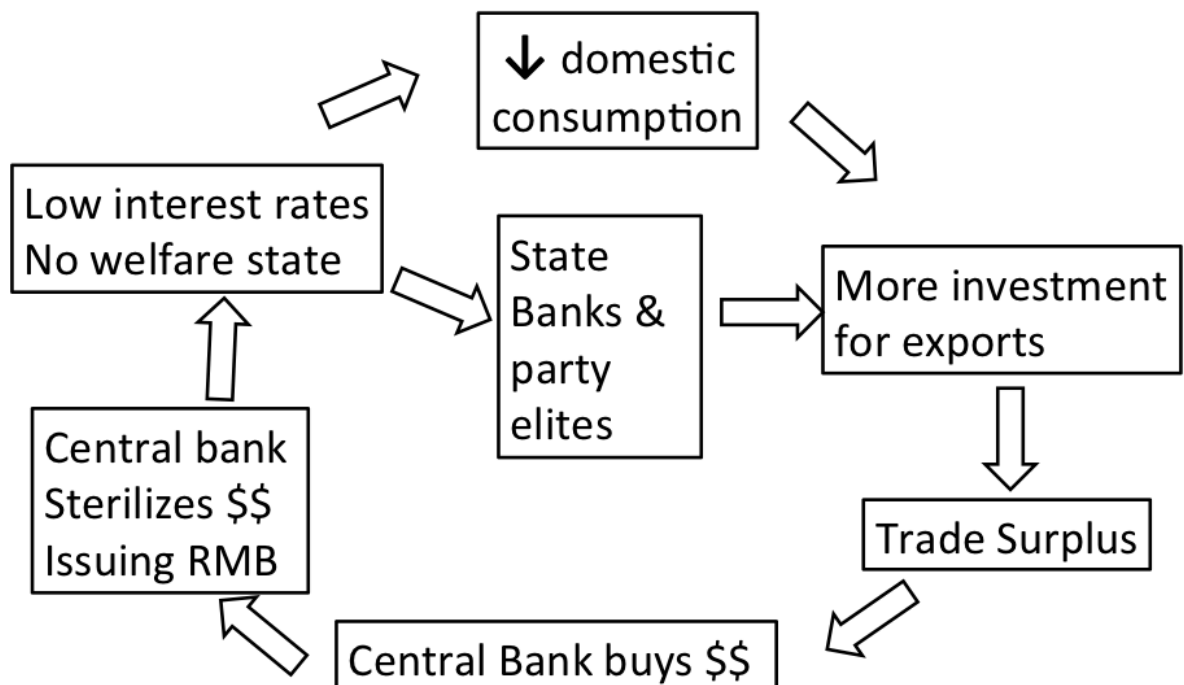
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<sup>12</sup> Yang Yao, "China Model and its Future," in *China: The Next 20 Years of Reform and Development*, ed. Ross Garnaut, Jane Golley and Ligang Song (Canberra: Australian National University E-Press, 2010), 45.

state firms could tap into the state owned banking system to finance massive investments in export capacity.

But despite these domestic sources for growth, Chinese economic growth relied heavily on exports to provide more than a margin of error in employment generation and to drive industrial upgrading. China needed to generate about 20 to 24 million jobs per year after 1995 to keep employment steady. This required GDP growth over 7-8 percent per year. While China's internal economy was quite dynamic, only a robust export economy could guarantee rates this high, and that meant exporting to the United States. By the 2000s, the United States was absorbing between 30 and 40 percent of China's exports, and a 1 percent increase in US GDP predictably created a 1 percent increase in Chinese GDP. The Peoples Bank of China, the central bank, played a critical role in assuring that exports continued to push growth up to politically necessary levels.

Figure 4: China's growth cycle  
Source: Author's construction



China's initial advantage in world markets was simply extremely low wages. Consider clothing, where China's share of world exports doubled from roughly 15 percent in 1992 to 27 percent in 2005.<sup>13</sup> In garment assembly, there was simply no way that a US worker earning the minimum wage (in 1999 roughly \$9 per hour including the employer's non-wage costs) could compete with a Chinese worker earning roughly \$0.50 per hour. US productivity was at best 2 times the Chinese level in this sector, not the 20 times needed.<sup>14</sup> So a shift of assembly of commoditized garments out of the United States (and Europe) was a certainty. But it was not a certainty that Chinese workers, rather than Bengali, Indonesian or Vietnamese workers would be the primary beneficiaries of this shift. Moreover, going forward, the Chinese government wanted to use export surpluses to upgrade from low skill products like garments to medium technology products like machinery.

Yet success exporting garments might generate self-defeating outcomes. A durable export surplus would exert upward pressure on the renminbi's exchange rate relative to both the dollar and the currencies of rival Asian exporters. If the renminbi rose relative to the dollar while competitor countries' currencies did not, then the giant retail firms organizing garment commodity chains would shift production elsewhere. If the renminbi rose relative to the dollar, then the much larger productivity differential with the United States in medium technology goods would make it pointless to extend a production chain across the Pacific and would thus truncate China's development at the level of low value, labor intense assembly.

So China made a political decision to hold its exchange rate steady against the dollar to assure continued surpluses and easier upgrading. Figure 5 shows the renminbi and yen exchange rates against the dollar, on an inverted scale (a rising line indicates a stronger yen or renminbi). Note the relative

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<sup>13</sup> Prema-Chandra Athukorala, "The Rise of China and East Asian Export Performance: Is the Crowding-Out Fear Warranted?" *World Economy* (2009): 234-266, at 240.

<sup>14</sup> China Textile University and Harvard Center of Textile and Apparel Research, *The Development of the China Apparel Industry*, November 1999, p. 22.

stability of the renminbi from 1995 to 2005. The PBoC created this stability by buying dollars from exporters with renminbi, and then mopping up the new liquidity by issuing RMB denominated bonds.<sup>15</sup> (This is how the PBoC ends up with a balance sheet composed of renminbi bonds as liabilities, and US Treasury bonds as assets.) China's highly regulated financial system made sterilization easier – banks could be forced to buy PBoC bonds. But even with efforts at sterilization, the decision to keep the renminbi fixed against the dollar reinforced the feedback loop favoring continued investment (indeed, over-investment) in exports.

First, even with sterilization, the liquidity from continued export surpluses pushed down nominal and real interest rates in China. Economic and political imperatives favored low nominal and real interest rates. Economically, low rates enabled higher rates of investment, and thus faster industrialization. Politically, only state owned firms or those connected to party elites had access to formal credit (and thus low, subsidized interest rates).<sup>16</sup> Indeed, one consequence of Tiananmen was a policy shift favoring urban areas and large firms at the expense of small and particularly rural enterprise.<sup>17</sup> Cheap capital thus enabled excessive investment in export production capacity, which was then validated by sales to the United States. And a fixed exchange rate made those sales possible, closing the loop by forcing the PBoC to continue to accumulate dollar denominated assets on its balance sheet to prevent a rise in the renminbi. This strategy helped boost. China's share of global exports from 2.9 to 7.3 percent, 1995 to 2005.<sup>18</sup>

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<sup>15</sup> Ronald MacKinnon, *Exchange Rates under the East Asian- Dollar Standard* (Cambridge, MA: MIT University Press, 2006).

<sup>16</sup> Kellee Tsai, *Back Alley Banking* (Ithaca, NY: Cornell University Press, 2004).

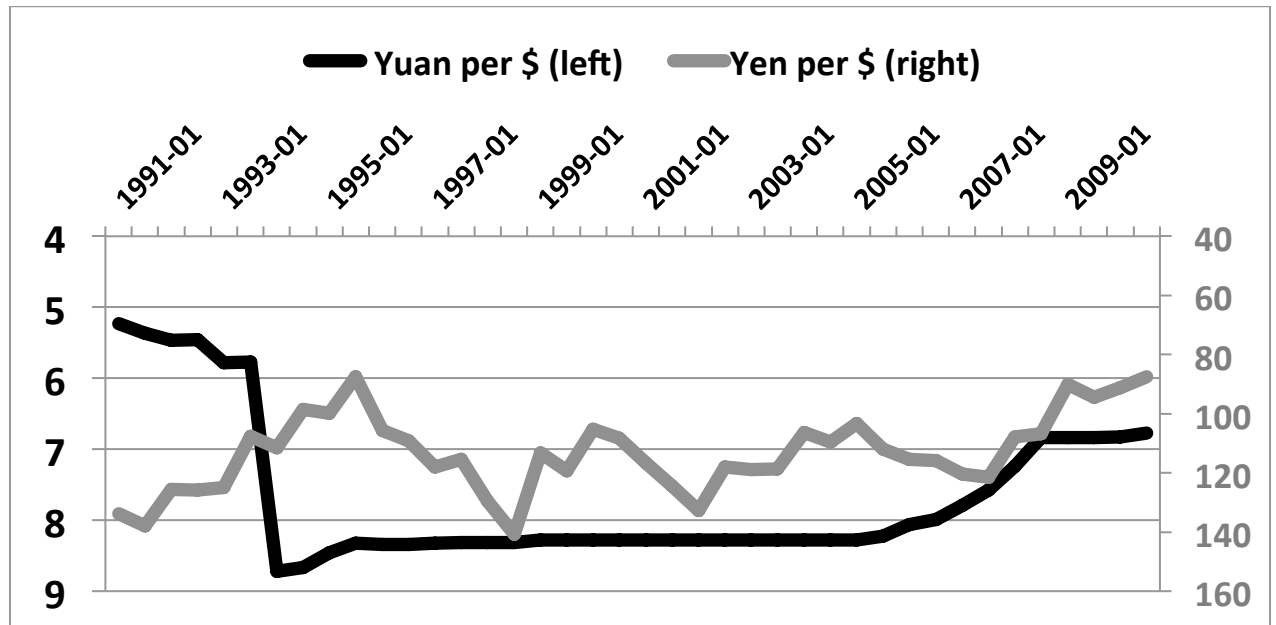
<sup>17</sup> Yasheng Huang, *Capitalism with Chinese Characteristics* (New York: Cambridge University Press, 2008).

<sup>18</sup> WTO World Trade Database, <http://www.wto.org>.



Figure 5: Yen and Yuan exchange rate with US Dollar, 1991 to 2010 (inverted scale)

Source: Author's construction from US Federal Reserve Bank data



Second, a fixed renminbi slowed Chinese household consumption growth, which also reinforced the feedback loop favoring investment in exports. While Chinese household income rose absolutely, household income growth and thus consumption lagged production growth by a consistent 2-3 percentage points each year.<sup>19</sup> Faced with low interest rates, Chinese households continued to save. Meanwhile state firms channeled their increasing income into continued investment rather than distributing profits as dividends. Household consumption declined from a more or less normal 50 plus percent in the 1980s to 35 percent in 2009. The macro-economic counterparts to declining consumption were burgeoning domestic investment and capital exports to the United States. The US and Chinese

<sup>19</sup> Michael Pettis, *China Financial Markets Blog*, October 16th, 2009, "China's September Data Suggest that the Long-term Overcapacity Problem is Only Intensifying," <http://mpettis.com/2009/10/china%e2%80%99s-september-data-suggest-that-the-long-term-overcapacity-problem-is-only-intensifying/>.

feedback loops intersect in this transfer of Chinese households' deferred consumption (manifested as trade surpluses) to US households for immediate consumption.

### *3: The unraveling*

Chinese and US growth was thus co-dependent until around 2005. After that, relationship became openly dysfunctional. First, China grew to the point where its calls on world raw materials began to reignite inflation in the United States. Second, the PBoC's continued sterilization of trade surpluses induced Chinese firms to substitute relatively cheap capital for labor. Chinese growth became more labor shedding than labor absorbing. Third, the increasing capital intensity of Chinese production meant that it began to compete with on-shore US production of medium technology goods, hindering rather than helping US employment. The counterparts to these Chinese trends were increased pressure on middle-class expenditures in the United States, erosion of middle class incomes, and the \$ 8 trillion housing bubble. All this contributed to the 2008 financial crisis. By accelerating each trend, the crisis has simply exacerbated US-China economic conflict.

Successful Chinese industrialization reversed part of the growth promoting disinflation dynamic in the United States after 2005. Given its initial low level of development, Chinese economic growth necessarily involved greater and greater calls on global raw material supplies, including, most importantly, oil. Development meant creating an entirely new infrastructure – roads, buildings, power generation, telecommunications – and thus huge inputs of cement, steel, copper and energy. All told, Chinese imports of oil, soybeans, and copper were about thirty times higher in 2008 than they were in 1995.<sup>20</sup> Inflationary pressure from raw materials prices forced the FED to increase rather than decrease interest rates starting in mid-2004.

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<sup>20</sup> Stephen Jen and Luca Bindelli, "AXJ as a Source of Global Disinflation and Inflation," Morgan Stanley Global Economic Forum, 30 November 2007, <http://www.morganstanley.com/views/gef/archive/2007/20071130-Fri.html>.

Both rising prices and rising interest rates put pressure on US household budgets. The bottom half of the US income distribution gets only about 18-20 percent of total income, so it is income constrained, that is, it already faces sharp trade-offs in its consumption. Prices rose most strongly for goods with low elasticity, in particular fuels and foods. While fuels account for about 11 percent of the average US household budget, in the bottom half of the income distribution they amount to over 15 percent. Many of these households also had purchased housing using adjustable rate mortgages (floating or variable rate mortgages), which exposed them to rising interest rates. Rising prices and rates thus forced these vulnerable households into trade-offs among commuting, food or housing payments.

Second, Chinese production became increasingly capital intense from 2004 onward. Rising wages partly drove this (see below). But the subsidization of export production and capital investment that the PBoC's fixed exchange rate with the US Dollar created also drove this. By keeping the renminbi artificially cheap, the PBoC essentially subsidized exports. The ratio of exports to GDP rose continuously through 2007, when the current account surplus peaked at 10 percent of GDP. By keeping domestic interest rates low – which it had to, in order to avoid losing money on the renminbi bonds balancing its US Treasury holdings – the PBoC encouraged a shift towards capital intense production methods. China's enterprises borrow at essentially zero real cost. Indeed, some argue that China's state owned enterprises generate zero or even large negative profits after interest rate subsidies equaling roughly 3.8 percentage points (380 basis points) are stripped out.<sup>21</sup>

The rising capital intensity of Chinese production created problems in China, by slowing the rate of labor absorption. But it also put downward pressure on US incomes. More capital intense Chinese production led to a substitution of local Chinese made components for imported components, and to

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<sup>21</sup>Giovanni Ferri and Li-Gang Liu, "Honor Thy Creditors Before Thy Shareholders: Are the Profits of Chinese State-Owned Enterprises Real?" *HKIMR Working Paper No.16/2009* April 2009; see also the data reported in Wang Jing, "Unirule: SOEs Register Negative Real Profits," *Caixing Online*, 6 June 2009, <http://english.caing.com/2011-03-03/100231927.html>.

displacement of US production of higher end consumer non-durables and electrical goods production. From 1994/95 to 2005/06, China's world market share of electrical goods exports went from 3.1 percent to 20.6 percent.<sup>22</sup> This led to declining nominal income and shrinking industrial employment in the bottom half of the US income distribution. Falling prices for imports from China had helped drive a disinflationary increase in real consumption in the United States in the 1990s. But now falling prices eroded incomes, making the price of imports moot to more and more families. Put differently, China nearly doubled its share of the rising US non-oil trade deficit to 46 percent between 2000 and 2006.

Third, successful Chinese industrialization also boosted wages in China, reinforcing the shift towards more capital intensive modes of production. Though there is some debate around the level of processing in Chinese exports and the degree to which Chinese wages are rising, these disagreements about rates, not trends. From 2004 onward, wages and benefits in Guangdong Province began rising above the level of productivity growth – as much as 20 to 40 percent in 2004 alone – prompting an exodus of labor intense firms into China's interior and to neighboring Vietnam.<sup>23</sup> Where textiles and garments constituted 28 percent of Chinese exports in 1997, electronics, at 35 percent replaced them as China's largest export by 2005.<sup>24</sup> Imports of components and parts still composed a growing share of China's machinery imports, but they fell in relation to total exports, indicating a rising local composition for exports. A telling indicator is that per capita steel consumption in China barely doubled from 1990 to

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<sup>22</sup> Prema-chandra Athukorala and Archanun Kohpaiboon, "China and East Asian Trade: The Decoupling Fallacy, Crisis and Policy Challenges," in *China: The Next 20 Years of Reform and Development*, ed. Ross Garnaut, Jane Golley and Ligang Song (Canberra: Australian National University E-Press, 2010), 197.

<sup>23</sup> Ross Garnaut, "The Turning Period in China's Economic Development: A Conceptual Framework and New Empirical Evidence," in *China: The Next 20 Years of Reform and Development*, ed. Ross Garnaut, Jane Golley and Ligang Song (Canberra: Australian National University E-Press, 2010), 29.

<sup>24</sup> Prema-chandra Athukorala, "The Rise of China and East Asian Export Performance: Is the Crowding-Out Fear Warranted?" *The World Economy* (2009): 238; Li Cui and Murtaza Syed, "The Shifting Structure of China's Trade and Production," *IMF Working Paper* WP/07/214 (Washington DC: IMF, 2007), 7.

2000, but then quadrupled from 2000 to 2010.<sup>25</sup> China was no longer competing simply with garment assemblers in the United States, but now was competing with or displacing medium technology production in cheap refrigerators, electric tools and housewares.

Continued, indeed increasing Chinese trade surpluses after 2005 thus helped create the conditions underlying the massive financial crisis of 2007-2009. China was not responsible for the specific form or depth of the crisis. These were purely a function of deregulation and non-regulation inside the United States that permitted financial firms to link different parts of the financial system together in a carry trade around housing.<sup>26</sup> US and European financial firms deliberately created a maturity mismatch, hoping to profit from differences in interest rates for short term liabilities taken on by the commercial finance part of capital markets and interest rates for long term assets in the subprime mortgage market. They compounded this by using credit default swaps to insure against mortgage defaults, thus also connecting the insurance sector to the mortgage market. China's responsibility lay in the continued recycling of its trade surpluses – particularly Chinese purchases of debt issued by Fannie Mae and Freddie Mac. These made it possible for US financial firms to extend credit to the subprime part of the mortgage market without facing a trade-off with other forms of investment.

Thus a symbiotic set of relationships promoting growth turned fratricidal. China's cheap goods and recycled trade earnings helped push US nominal interest rates ever lower. Falling nominal interest rates enabled US consumers to refinance their mortgages, cash out home equity, and continue both to import goods from China and drive up local housing related employment. China meanwhile got millions of higher quality industrial jobs and enough extra internal aggregate demand to transfer millions of

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<sup>25</sup> Huw McKay, Yu Sheng and Ligang Song, "China's Metal Intensity in Comparative Perspective," in *China: The Next 20 Years of Reform and Development*, ed. Ross Garnaut, Jane Golley and Ligang Song (Canberra: Australian National University E-Press, 2010), p. 91.

<sup>26</sup> Herman Schwartz, "Housing, the Welfare State, and the Global Financial Crisis: What is the Connection?" *Politics and Society* (2012) 40: 35-58.

people from rural to urban employment. But by 2005 China had entered a capital intense growth path that destroyed too much employment in the United States and undermined Chinese efforts to complete its transition to an urban economy. Deliberate manipulation of the dollar-renminbi exchange rate was producing inflation in China and depression in the United States.

#### *4: After you, please*

The shift to a more fratricidal relationship between China and the United States creates considerable potential for conflict. Who has the upper hand in the current relationship? And what about third parties? Two things matter: the structural situation in each country and the issue of who has the last move. Structurally, both countries have extremely weak financial systems. In the United States, the core issue is the speed at which housing prices recover and – almost the same thing – how fast banks rebuild their capital. Recapitalized banks and stable housing prices would allow the FED to reel in the liquidity it created to bail out the banks.

Put simply, FED intervention during the crisis boiled down to printing money to buy Treasury bonds which could then be exchanged for banks' holdings of bad mortgage backed securities (MBS). By March 2010 the FED held approximately \$1.25 trillion in MBS. In principle it could hold these MBS to maturity, hoping that a steady revival of the economy and thus nominal house prices would allow redemption at par. In practice, given that 25 % of all mortgaged homes were worth less than their mortgage in 2011, an orderly resolution might leave the counterpart \$1.25 trillion in excess liquidity hanging around in financial markets for years. This \$1.25 trillion was the source of much misplaced anxiety about inflation in 2010-2011. But misplaced anxiety can move markets, particularly in the very volatile food and fuel sectors. On the other side, by 2011 unemployment had been at historically high levels for longer than any prior post-1950 recession, and the labor force participation rate had fallen back to 64 %, a level not seen since 1982. The longer people stay unemployed, the less likely that they

will ever find employment again. A permanent drop in labor force participation would slow future growth and wreck household balance sheets. The FED thus found itself trapped between too fast a recovery, which might trigger an inflation-scare and interest rate spike, and too slow a recovery, which might lock millions of people into permanent unemployment. In this context, continued high unemployment can only feed demands for trade protection.

In China the core issue is the degree to which any effort to control inflation will reveal the degree to which banks hold non-performing loans. As Michael Pettis bluntly said in a 7 March 2011 blog post, “the Chinese banking system is one of the least efficient major systems in the world when it comes to assessing risk and allocating capital, and would be massively bankrupt without repressed interest rates and the implicit (and sometimes explicit) socialization of credit risk.” The central state finds it hard to control local lending, particularly after years of promoting officials based on their local economic growth performance. Tight clusters of local bankers, builders and party officials have huge incentives to develop real estate, infrastructure and industry as fast as possible. Lending has an economic basis – land sales are a major source of provincial revenue. But the choice of to whom to lend and for what occurs on a largely political rather than strictly economic basis. Overbuilding and overcapacity thus emerges from inter-provincial competition and the rush to enrich oneself using cheap credit. By 2010 China’s provinces were building 66 subway systems (more than western Europe possesses) and another 45 airports (on top of its existing 175) at a time when worries about peak oil had already surfaced and when 130 of those airports were already loss making.<sup>27</sup>

By 2010, then, China faced its own version of the Mundell-Fleming trilemma. The Mundell-Fleming trilemma says that countries can attain only two of the three policy options of fixed exchange rates, free capital mobility, and monetary policy autonomy. China opts against free capital mobility,

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<sup>27</sup> Geoff Dyer, “China Plans Airport Building Spree,” *Financial Times* 24 February 2011, <http://www.ft.com/cms/s/0/aa8aa0b8-4013-11e0-811f-00144feabdc0.html#ixzz1FySc9M6o>.

which means that in principle it remains possible to use monetary policy to control inflation. As noted above, though, keeping the renminbi fixed against the dollar at a point below the real rate of exchange creates inflation via a rising trade surplus. Monetary policy is thus also pinned, as inflation is built into the macro-economy via the choice of the exchange rate.

Each of China's policy choices thus involves a politically painful decision, which encourages delay. The central bank could raise interest rates sharply, slowing investment growth. But boosting interest rates will put many firms into a negative cashflow situation unless purchasing power can be shifted towards personal consumption, and that personal consumption absorbs output from the existing excess capacity. In addition, as noted above, higher interest rates would also invert flows on the PBoC's balance sheet, causing it to lose money. China could free the capital account, but this might lead to a stampede of private capital outward in search of higher returns and more secure property rights. Finally China could break the exchange rate and revalue. Chinese consumers would get cheap imports, but the export sector's profits would fall. The natural reaction by that sector would be to flee into even more capital intense production and more production for the domestic market. This would probably freeze China at its current level of productivity and per capita income.

Avenues to an amicable resolution of US-Chinese tensions exist. China need not use its foreign currency reserves to purchase manufactured imports from the United States. Gang Xiao argues that if the number of Chinese students studying abroad continues to grow at its current 8 % per year, this would absorb 30 percent of China's current reserve holdings.<sup>28</sup> This would simultaneously remove exchange rate risk from the PBoC balance sheet, upgrade Chinese human capital, and maintain employment in one of the most important sectors in the US economy. Nevertheless, this optimistic

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<sup>28</sup> Geng Xiao, "Exchange rate policy and macroeconomic adjustment," in *China: The Next 20 Years of Reform and Development*, ed. Ross Garnaut, Jane Golley and Ligang Song (Canberra: Australian National University E-Press, 2010), 157.



scenario probably requires both sides to be more rational and willing to confront their own local elites than they have in the past.

A steady revaluation of the renminbi against the dollar is probably the safest way for both countries to achieve balance. This seems unlikely given the distribution of political power in China. But the United States essentially has the last move for two related reasons. First, the United States possesses not just a reserve currency, but *the* reserve currency. Second, in the bilateral US-China relationship the United States is the deficit and debtor country. While this is problematic, in an economic conflict it means that the United States has less to lose in employment and growth terms from escalating trade tensions.

If trade tensions result in fewer US imports from China, the United States would most likely experience a revival of local production. While many Chinese imports could not be replaced with local US production, the countries that would replace China as the source of US consumer non-durables all have more modest ambitions regarding their industrial future. These countries are less likely or able to sterilize trade surpluses in order to maintain global market share once China is taken out of the trade equation. Instead, their surpluses would return to the United States as purchases of US made capital goods and infrastructure equipment. Increased imports from Mexico, for example, generate relatively more US exports to Mexico than do increased imports from China.

In September 2010, the US Congress passed a bill calling for a 10 percent tariff surcharge on Chinese made import exports. The Executive immediately matched this “bad cop” message from Congress with a “good cop” message. In October 2010, Treasury secretary Timothy Geithner noted that “Our initial achievements [attaining global rebalancing] are at risk of being undermined by the limited extent of progress toward more domestic demand- led growth in countries running external surpluses and by the extent of foreign-exchange intervention as countries with undervalued currencies lean

against appreciation.”<sup>29</sup> The Chinese response was an oddly posed threat that reflected their weaker hand. Prime Minister Wen Jiabao noted that a stronger renminbi might create social unrest in China:

“Do not work to pressurise us on the renminbi rate... Many of our exporting companies would have to close down, migrant workers would have to return to their villages. If China saw social and economic turbulence, then it would be a disaster for the world.”<sup>30</sup>

The positions here are asymmetrical. The United States stands to gain employment and growth from a decline in Chinese exports, while China cannot gain from refusing to sell to the United States, or, as noted above, doing what amounts to the same thing by declining to buy Treasury bonds.

In this context, the Federal Reserve Bank’s “QE2” plicy – quantitative easing of the monetary supply by buying \$600 billion in assets using newly created cash – was a signal that the United States would attempt to change the exchange rate on its own if China did not cooperate. Just so the decision in September 2011 to recycle FED receipts from its holding of MBS right back into more purchases of MBS, and to push down the yield on long term Treasury bonds, signaled a determination to weaken the dollar. China could do little by way of retaliation. Instead, these US moves simply magnify China’s internal problems with inflation. The PBoC has attempted to damp down this inflation by raising reserve requirements and the policy interest rate. But the renminbi’s undervaluation is now creating inexorable pressure for revaluation, either as a matter of policy, or through the inflation driven re-pricing of Chinese production costs. It remains to be seen if the change in the exchange rate will be gradual or abrupt.

Meanwhile what of third parties? Third parties like Brazil, Japan, India, Thailand and Korea were becoming increasingly irritated with China’s exchange rate policies in 2010 and 2011. The most

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<sup>29</sup> “Statement by the Honorable Timothy Geithner to the 2010 Meeting of the IMF,” 8 October 2010, Washington DC, <http://www.imf.org/external/am/2010/speeches/pr29e.pdf>.

<sup>30</sup> Alan Beattie, “Wen warns against renminbi pressure,” *Financial Times* 6 October 2010, accessed 6 October 2010, <http://www.ft.com/cms/s/0/f92d794e-d16d-11df-96d1-00144feabdc0.html>.

important of these is the European Union, which currently has a trade deficit with China that rivals that of the US with China. Dynamics in Europe resemble those in the United States. Trade deficits with China aggravate the employment and growth problems at the heart of the Eurozone debt crisis. The net effects are the same: rising unemployment and thus rising protectionist pressures going forward. The European Central Bank is committed to prioritizing inflation control over re-establishing pre-crisis levels of growth and employment, which puts downward pressure on consumption, including imported consumption. And the Eurozone crisis has caused the US dollar to rise relative to the euro, dragging the renminbi with it, and thus also reduced European for Chinese exports. And if that is not enough, European states are past masters at opaque forms of trade protection.

China and the United States are currently locked into a zero-sum battle over jobs and economic growth. Chinese exports are largely predicated on the current low value of the renminbi. To the extent that past Chinese investment requires massive volumes of exports to validate the debt incurred making that investment, and to the extent that Chinese growth requires exports in order to be able to absorb its labor overhang, Chinese growth is job displacing in the rest of the world, and particularly the United States. On the other hand, efforts by the United States to re-employ its nearly 7 million long term unemployed necessarily involve a reduction in the US trade deficit to more sustainable levels. That can occur either through substitution of imports by local production or a shift away from imported consumption.

As of 2012, then, the central dilemma in the global economy was a choice between Chinese inflation and US stagnation. It remains to be seen who will bear the greater share of adjustment pain. The current global economy very much resembles that of the late 1920s and early 1930s. At that time, trade deficit countries found quick solutions to their employment difficulties by closing their borders to flows of goods, people, and capital. The United States and Europe both retain these options. China, by contrast, is a trade surplus country and cannot afford to see trade wither away. In this conflict of

interests, China's holdings of dollar assets are not a source of power. However they might be part of a relatively painless solution if they are spent wisely. The obvious solution to current global and domestic imbalances, and the protectionist pressures they create, is for the Chinese state to shed part of its dollar holdings by using them to buy American sourced goods that benefit Chinese consumers. The money is there. What China lacks is political capital to make this happen. Like Japan, China seems destined to slide into a financial crisis driven by its inability to shift income towards households and away from politically favored firms. In this respect the co-dependent US and Chinese economies are the same, except that the United States has already had its crisis.

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