A Map to the Revived Bretton Woods End Game:
Direct Investment, Rising Real Wages and the Absorption
of Excess Labor in the Periphery*

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The consensus opinion on China's and Asia's currency policy is that it is destabilizing and must ultimately come to a bad end.[1] The "undervaluation" of currencies in order to generate large trade surpluses, the accumulation of immense foreign exchange reserves, the distortion of world interest rates, investment patterns, and cross-exchange rates all evidence the instability.[2] The longer it lasts the worse and more abrupt the end will be, both for Asia and the rest of the world. Among the many ills forecast are:

- currency crises resulting in discontinuous appreciations of periphery exchange rates vs. USD
- crisis in periphery country banking systems and insolvency of nonfinancial firms
- a rapid rise beyond the normal cyclical pattern in US yields with balance sheet problems across the world
- excessive US government and US foreign debt
- large flow problems as the periphery reallocates resources away from traded goods and a mirror image reallocation in the center

A stepping-stone along the way to this disaster is an overheating Chinese economy with rapid inflation. This all adds up to the intensely sour taste of a massive misdirection of the world's savings. The only question is when the adjustment will occur: a big hit now or a much bigger one later.

In this paper, we argue that the adjustment—which indeed must eventually occur—can proceed smoothly. The catastrophic losses and abrupt price breaks forecast by the conventional wisdom of international macroeconomics arise from a model of very naïve government behavior. In that model, periphery governments stubbornly maintain a distorted exchange rate until it is overwhelmed by speculative capital flows.[3]

In our view a more sensible political economy is the source of current imbalances. The objectives are the rapid mobilization of underemployed Asian labor and the accumulation of an efficient capital stock. The mechanism that regulates the mobilization is a cross-border transfer to countries like the United States that are willing to restructure their labor markets to accommodate the restructuring of labor markets in Asia. Describing the

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[1] The discomfort with the current situation was carefully set out several years ago (Mann, 1999; Obstfeld and Rogoff, 2000). The logic is that although international capital markets were much larger and more resilient than in the past they could not support a US current account deficit of 5% of GDP for long. Moreover, even a mild withdrawal of credit from the US—for example a reduction in financing that required a return to current account balance—would generate a very large and sudden depreciation in the real value of the dollar. The sensitivity of real exchange rates to changes in current accounts is related to the limited integration of goods markets across countries. A related concern then and now is that the low level of private and government savings in the US is generating a perverse flow of world savings to the United States. Summers (2004) has recently argued, for example, that the single engine for world recovery, US growth and US fiscal deficits, is a recipe for disaster both for the US and the rest of the world.

[2] We add the fright quotes here because we believe that invoking "undervaluation" in the context of profound underemployment and internal imbalance is more a rhetorical than scientific usage.

[3] No one loves these models more than we do; we just do not think the political economy behind speculative attack models fits the current situation.

policies that generate this transfer and their optimal settings over a finite adjustment period is equivalent to describing the nature of the current international monetary system, all its balance-of-payments relationships, and its evolution. We argue below that a simple but powerful economic analysis of an exhaustible resource problem suggests that current conditions in international markets are consistent with a stable and properly functioning system. Our analysis suggests that the system is not headed for a crisis and will serve to manage the great economic problem of our time, the economic emergence of China.

We Don't See Much Evidence of an Abrupt Break in the System

To some extent the warnings have proven correct. The dollar has depreciated sharply against the euro and other floating currencies as private investors have reduced their demand for dollar investments. But, as we have argued elsewhere, the other two legs of the story are missing to date. US interest rates have not gone up to reflect foreign reluctance to lend, given the current stage of the cycle, and the flow of world savings to the US has not diminished. Moreover, economic growth in Asia has not been derailed by domestic overheating or a breakdown in the international trading system.

The Quick Erosion as the Game Ends

The reason is no mystery; governments in Asia are providing the necessary financing. The issue now is how long this can continue. The conventional view is that the Asian governments can fill the gap for only a short interval and, when the wheels fall off, the adjustment costs for the world economy will be very heavy.[4] The mechanism for the disaster is a familiar refrain. Expectations for the large exchange rate change "needed" to "correct" current imbalances generate massive private capital flows to the periphery. Capital controls and financial repression are no match for a determined private sector. If inflows are not sterilized, the monetary base explodes and the "needed" real exchange rate adjustment comes through inflation. Faced with this unpleasant reality central banks give up and revalue nominal exchange rates.

But We Are Not Yet at Half Time

In the alternative interpretation that we will develop here, the mechanism set out above is a good description of the final days of the original Bretton Woods system. It is relevant for countries that are ready to graduate to the center. But it ignores the fact that the system lasted for two decades. The erosion of the effectiveness of capital controls and domestic financial repression *follows* the development of domestic financial markets, and this process typically takes many years.

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[4] See Rogoff (2003). As Rogoff puts it, flying on one engine is easy as compared to landing on one wheel.

In a series of papers, we have argued that the current international monetary system can be understood as a reemergence of the Bretton Woods system.[5] In this system, the center comprises industrial countries with integrated capital markets and floating exchange rates. An economically important part of the periphery comprises capital account countries (Latin America) that also allow free capital movements and allow their exchange rates to float. The periphery also comprises an increasingly ascendant set of trade account countries (Asia) that fix or manage undervalued exchange rates and are willing as a group to generate official capital flows needed to finance *both* the consequent current account surpluses *and* net private capital inflows. None of the rest of the world's net savings flows into this periphery.[6]

The blunt policy instrument used by the trade account region is an "undervalued" exchange rate that is maintained by capital controls, domestic financial repression and official intervention. This policy is used during a transition until the periphery country graduates to the center. The challenge is to explain how these policies generate current accounts, growth rates and relative prices that resemble those observed today and then to project these variables into the future. In particular, we are interested in the nature of optimal policies during the transition and the nature of the endgame.

Exhaustible Resources

The economics underlying the current global imbalance is best viewed through the lens of an exhaustible resource model. The exhaustible resource is the huge pool of Asian labor that is underemployed by industrial country standards. Left underemployed, it is politically dangerous and socially costly. Once employed it produces a stream of product marginally valued at the global real wage and contributes to social and political stability.

But the faster it is employed, the greater the socially costly dislocation of labor in other countries. So, to avoid commercial policy retaliations, other countries must be compensated through one transfer policy or another. Put another way, *a larger piece of the new product stream must be paid to the importing country* the faster is the absorption of the unemployed pool. Since the pool is exhaustible, these transfer policies are temporary features of the transition.

What force drives the global system?

China has about 200 million unemployed or underemployed workers to bring into the modern labor force. For political stability, there is a need for 10-12 million net new jobs

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[5] Dooley, Folkerts-Landau, and Garber (2003a, 2003b, 2004a, 2004b).
[6]This policy has been criticized as wrongheaded in that FDI should be the source of global finance for a deficit on current account. The principle behind this argument seems to be that the external accounts should be properly balanced as a priority over the internal balance. See Goldstein and Lardy (2003). The alternative argument is that being a net capital exporter seems to work.

per year in the urban centers. A growth rate of around 8+% has served to employ about 10 million new workers each year. About 3 million have been in the export sector.[7]

If the world can absorb politically only the output of an additional 10 million workers per year (3 million in the export sector), then simple arithmetic indicates that this surplus is a force for twenty years more in the global system. If it can absorb the surplus faster, say at a rising absolute rate that will keep the Chinese growth rate constant at 8% until the surplus is eliminated, then straightforward compounding and linearity assumptions indicate that this will drive the global system ever more relentlessly for the next 12 years (see Chart 1).

Chart 1. Unemployed Pool and Employment Increase
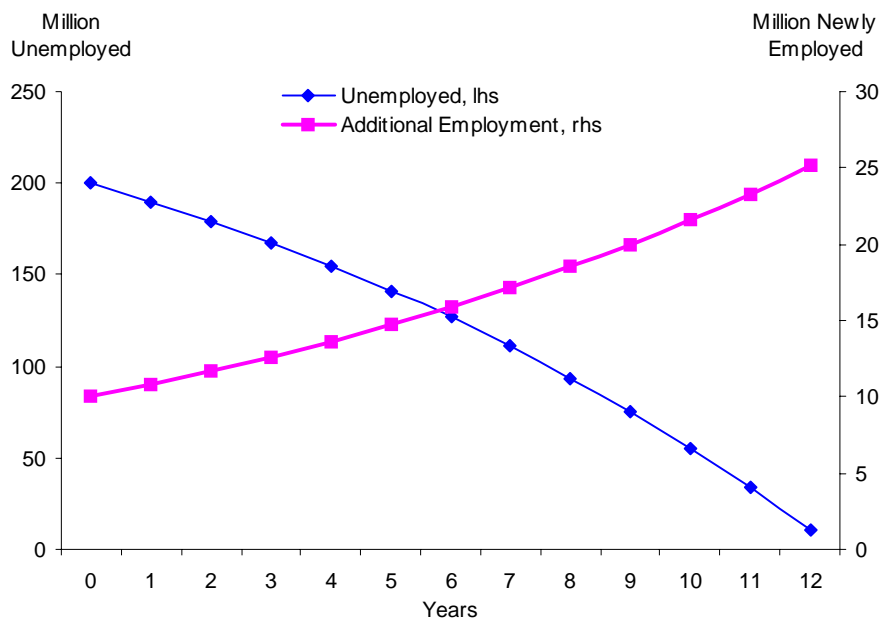
Note that if the growth rate of 8% is maintained, then a growing pressure will be put on the rest of the world's labor market, peaking out at the end of the process. We argue below, however, that the optimal adjustment path front loads the absorption of labor.

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[7]Exports generate 10% of value added in GDP. The export sector grows twice as fast as the rest of the economy. So 25% of all growth is from the export sector. Because of a lower capital-labor ratio than in the rest of the economy, the export sector accounts for about 30% of employment growth.

We do not take a stand on how long this force will drive the global system. But twelve to twenty years has defined an *era* for any recent international monetary system.

The Political Economy Tradeoffs

In trying to understand Asia today, it is not sensible to argue that the governments' policy is to maintain mindlessly undervalued exchange rates indefinitely in a beggar-thy-neighbor policy. The better approach is to look behind the current exchange rate policy to see what the government is trying to accomplish.[8] Our interpretation is that a sensible desire to absorb unproductive labor is at the root of the array of policy choices.

We assume the government has two objectives:

- It wants to move workers from an unproductive pool to produce positive marginal product in the industrial sector. The benefits are both economic and political. The real wages of workers newly absorbed into the industrial sector rise, although at the cost of keeping the overall wage of existing productive workers low. Moreover, the pool of potentially disruptive excess labor is reduced. The larger the size of the remaining unproductive labor pool, the greater the political cost to the government. The government wants to reduce this pool quickly, but faces increasing foreign economic and political costs that increase with the speed of employment from the pool.
- The government wants the capital stock accumulated as the pool of labor is absorbed into the industrial sector to be efficient: at the end of the transition period, the capital stock should be capable, *when combined with domestic labor paid the world real wage*, of producing goods going forward that are competitive with those produced in other countries.

This last objective is a crucial constraint: not just any junk make-work project will do because the history of development has shown repeatedly that this is the way to end-game crisis. Our guess is that this objective reduces the chances that a sudden change in relative prices, notably exchange rates and asset prices, at the end of the transition period is likely to be an outcome.

Optimal absorption rates for the labor pool: An exhaustible resource problem

The political economy set out above suggests that the challenge is to set up a sharing of benefits with the receiving country (the destination for this surplus labor product) so that it will accept the political costs of the rapid restructuring of its own labor market to accommodate the increased flow of imports.[9] We will argue that the structure of this

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[8]We are really referring to China's development strategy. The exchange rates of other Asian countries fly in formation with the CNY to maintain relative competitiveness.

[9]Consumers of cheap imports in the center benefit from rapid import penetration but we observe that although their willingness to compensate losers is important, it has often failed to outweigh the power of import competing industries in what could be characterized as a beggar-thy-neighbor policy. Competitive

fundamental problem in international finance is also remarkably analogous to an exhaustible resource pricing problem.

In the current global system, benefits are shared with importing countries by initially giving foreign capital access to Asian labor at a low domestic real wage relative to the world real wage. This gives the capitalist excess profits for some time period and provides the resources for the capitalist to utilize to keep home country import markets open. The trick is to set the real wage (real exchange rate) low enough and to adjust it gradually upward to the expected real wage in the rest of the world until the excess labor pool is exhausted, all at a minimum cost.

We show in this section that the optimal path for the real wage is something like AB or CD in Chart 2. The important feature of this adjustment path is that domestic labor (the real exchange rate) is initially undervalued but converges to world levels at the end of the adjustment period. This means that the real exchange rate is initially distorted but converges to a sustainable level. In evaluating the stability of the system, this feature of the optimal adjustment path is all important.

Chart 2. Real Wages and Adjustment
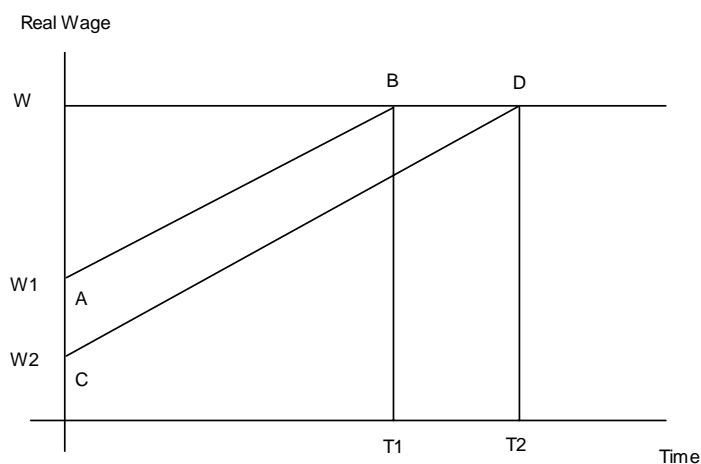
A country with a very large stock of labor to employ will want to set a real exchange rate that appears to be grossly undervalued by conventional measures. But the undervaluation fades away over time and with it the need for controls over capital flows and other policies needed to insure internal balance discussed below.

devaluation or commercial policy has, therefore, often been imposed. A contribution from the periphery to capital in the center is a possible additional sweetener to avoid this impasse.

The optimal strategy for the government is to set the initial wage and the rate of change in the wage in order to fully employ the stock of labor at a minimum cost. Consider first the rate of change for the real wage. An additional unit of labor employed provides a nonnegative yield to the government b. A unit of unemployed labor costs government a yield of –r. The yield b can be thought of as tax revenue or political support for the government. The yield –r might be transfers to the unemployed or political opposition.

The "price" the government expects to pay the foreign investor to encourage the global absorption of this labor must fall at the rate $b + r$.

To see this, suppose instead that the government kept the wage constant for two consecutive time periods. A constant wage generates a constant excess rate of return, which is sufficient to overcome the resistance of the labor restructured in the importing country. It therefore generates a constant flow of new employment. If the wage in the first period was set slightly lower than in the second period, for the same average wage, less unemployed labor will be carried over into the second period. The carryover is costly so a constant wage cannot be optimal. The government can get the same increase in employment at a lower cost by frontloading the adjustment.

The incentive with which the government sweetens the provision of labor to investors is the difference between the domestic real wage and the world real wage. This difference must fall, that is, the market wage must be expected to rise.

There are two reasons for the flow demand by the foreign direct investor to be decreasing in the wage rate. First, we make the usual assumption that investment installation costs rise in the rate of investment over time, the usual bottleneck argument. It follows that a rapid adjustment requires a greater cost of capital per worker. Second, investors have to make transfers to offset the political power of displaced workers in the importing country. Again, it seems likely that the adjustment costs in the country restructuring its labor market are increasing in the rate of import penetration.

Paths AB and CD satisfy this rate of change condition. Path AB starts from w_1, a relatively high initial real wage, and increases at rate $b + r$. Path CD begins with w_2 and rises at the same rate. The full solution to the Hotelling (1931) problem requires that the government set the initial wage so that the initial stock of labor is employed when the domestic wage rises to the world wage. Clearly a lower initial real wage path CD generates more total employment over the interval from t_0 to T_2 as compared to path AB from t_0 to T_1. It follows that the integral of employment increases as the initial wage declines and only one initial wage fully employs the initial labor supply. It also follows that a country with a very large stock of labor to employ will want to set a real exchange rate that appears to be grossly undervalued by conventional measures.[10] Moreover, the adjustment period is determined by the equilibrium adjustment path and, other things equal, is longer the larger the initial stock of labor to be employed.

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[10] The idea that internal balance is an important determinant of the "equilibrium" exchange rate is a very old one. See Nurske (1939).

We can summarize this section as follows. The optimal exchange rate and inflation policy are derived from the exhaustible resource problem. For a fixed exchange rate regime only one initial real exchange rate is optimal and only one rate of inflation generates the optimal path for the real wage over time. The length of the adjustment period is determined and at its end the following conditions hold:

- The domestic real wage equals the world real wage in the manufacturing sector.
- The initial pool of surplus labor is employed.
- The capital stock has increased to match the world capital/labor ratio in manufacturing.
- The political costs of adjusting displaced labor and capital in the importing country have been compensated for their costs of adjustment. This co-opts attempts to use commercial policy to freeze out the exports that are vital to the development policy.

An Indeterminacy: Adjust Nominal Wages or Nominal Exchange Rates?

The optimal adjustment path for the real wage allows the central bank to choose a path for the nominal wage rate or the nominal exchange rate but not both independently. In fact Asian central banks use both techniques. For a fixed exchange rate regime the central bank manages the inflation rate in order to regulate the dollar value of domestic wages and prices. In this case we would expect wage inflation to be above that in the center so that domestic real wages rise over time. The alternative would be to set domestic wage and price inflation at or below that in the center and then allow the nominal exchange rate to appreciate over time but at a controlled rate.

As long as private market participants understand that policy is driven by the objectives set out above—the optimal path for the real wage rate--the *same pattern of real private capital flows and trade account* will be generated by either a fixed or managed float exchange rate arrangement. From the balance-of-payments accounting identity, it follows that *the path of real and nominal official intervention is invariant to whether a fixed rate or managed float regime is chosen.* Those who argue the necessity of switching to a managed appreciation *because* of the large accumulation of official reserves are missing the basic policy problem and its resolution. Moreover, switching from fixed to managed floating, perhaps in the face of political pressure from the center, would not alter the real nature of the transition.

The Key Role of Financial Repression

A key to this regime is the ability of the government to repress real wages for an extended period of time. In our framework, this is equivalent to controlling the rate of inflation and the nominal exchange rate. Given a foreign rate of inflation and an international interest rate, this clearly requires that the link between domestic and international interest rates be broken. In our view China has more than adequate controls on domestic and international financial transactions to make this possible.

- Purchases of international bonds are strictly controlled. State owned or controlled banks provide all the claims available for domestic savers.
  - the government sets the interest rate on these bank liabilities and rations bank credit to the private sector
  - growth in the foreign part of the monetary base is determined by the current account surplus plus targeted net direct investment inflows.

In this repressed domestic financial system, growth in domestic credit from the banking system is a residual, that is, the difference between desired money base growth, (determined by the desired rate of inflation), the growth in the demand for money and the growth in the foreign part of the base.

Domestic savings not purchased by the banking system are absorbed by sales of domestic treasury or central bank securities to households and firms. Note that as long as the real interest rate that clears this market is not above the return on US treasury securities or other forms of investing the fx reserves the government can absorb domestic savings and intermediate into foreign bonds at a profit.

The government rations credit to the private sector by forcing the banks to buy government securities through liquidity and reserve requirements and then rations the remaining credit to the private sector at fixed lending rates. This of course sets up strong incentives for private lenders and borrowers to go offshore or to alternative domestic intermediaries. We assume that the government is an effective counterforce to such financial innovation for the requisite amount of time.

Internal Balance

The macro management problem for the government in implementing this policy is daunting but simple enough to set out. In pursing the employment objective, a distorted real exchange rate will create imbalances in the economy that require an additional policy instrument. As noted above, the bottom line is that the government must be able to manage the domestic real interest rate throughout the adjustment period to keep the domestic economy in balance. The good news is that the problems are large but diminish over time.

To make this argument, assume the economy, aside from the 200 million, is in full employment equilibrium with effective capital controls, no initial net international investment position, and an exchange rate that balances trade. To set the problem in motion, now imagine that 200 million unemployed people appear from the provinces. As discussed above, the path for the real exchange rate that solves the absorption problem involves a sudden real depreciation that is gradually eliminated. The exchange rate path that solves the absorption problem therefore subsidizes exports relative to imports and the trade balance initially moves from balance to surplus.[11]

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[11] An important mitigating factor is that adjustments in commercial policy are likely to encourage imports. For example, the initial condition for China is a large gap between the effective exchange rate for imports

The initial current account surplus must equal the amount by which domestic (government plus private) savings exceeds domestic absorption. It follows that a rise in the domestic interest rate is needed to reduce absorption relative to savings. But what happens to the interest rate that insures internal balance over time?

During the adjustment period the trade surplus as a share of GDP will decline and may move into deficit as the real exchange rate appreciates and domestic income grows more rapidly than foreign income. A surplus on the service account will appear and grow as net asset accumulation generates net capital income. But the overall current account as a percent of domestic GDP will fall for any reasonable set of parameters. It follows that the domestic interest rate will fall over time as a smaller share of domestic absorption is crowded out by net transfers abroad. This mitigates the interest differential pressure on capital controls.

Sterilization and Inflation

The relevant capital flow "problem" in the face of expected revaluation is large private capital inflows. Clearly if private capital inflows augment the monetary base and in turn increase domestic inflation, real wage growth will be too rapid and the transition will be too short to accomplish the government's objectives. However, if capital inflows are sterilized, and if domestic financial repression allows the government to finance reserve creation by issuing low interest domestic securities, the inflationary impact is eliminated.

This is an empirical issue. Capital controls and financial repression do not last forever but neither does the regime we are describing. We simply observe that to date the Chinese government has been very successful in hitting an aggressive inflation target. Some observers have suggested that overheating and an inflationary spiral are already underway. In our view, that is more of a prediction than an observation. Time will tell, but we would point out that there are many reasons why inflation may have increased in recent months. In general, a growth rate of 8+% has not generated inflation in China. In our view increases in reserve requirements last year, a form of sterilization, have already reduced the growth in money and credit. Moreover this has been accomplished with no increase in administered interest rates.

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and exports. In fact, China has not run a large overall trade surplus to date. In part, this probably reflects large declines in tariffs associated with ascension to the WTO.

China: M2 and credit growth

Source: CEIC.

If the capital account is liberalized, expectations of appreciation that are a central feature of the regime discussed below will generate capital inflows. Moreover, market-determined domestic interest rates would make sterilization expensive and so inflation would be the eventual result. But we do not expect opening of the capital account or deregulation of domestic interest rates. It follows that the economic linkages between exchange rate policy and inflation clearly relevant for capital account countries do not now exist, and we do not expect them to materialize for many years.

The Transfer to Foreign Capital

The regime set out so far encourages capital formation in export industries and makes room for this new investment in the domestic market. But it does not suggest that nonresident direct investors are the best placed to do the investing. Recall however that the investor has to expect that the foreign markets for exports remain open and that the political costs of displaced workers in the importing countries must be compensated.

A transparent but unrealistic example will help make the point. Suppose the right to supply capital is allocated by the government through licenses on a project-by-project basis. The gap between the domestic and world real wage would then be captured by selected capitalists.[12] Moreover, the government could lend through domestic balance sheets to the direct investor and finance this by sales of securities to the domestic market. The government can reduce the political costs to foreign governments associated with rapid export growth by allocating some of this capital to foreign investors from countries that allow the rapid growth of imports. In the present context, with the US absorbing much of the exports, this allocation would go to US firms. This provides an economic

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[12] More precisely, shared between the investor and the government and perhaps government officials. See Razin and Sadka (2002) for an interesting discussion of the allocation of rents.

rent until the convergence of real wages at T, which is not competed away because entry into foreign direct investment is rationed by the Chinese government.

The foreign investors then become a well-financed and effective lobby to counteract the resistance to the restructuring of the US labor force away from import substitutes.[13] Each time a worker is matched with foreign capital, the direct investor gets a benefit equal to the discounted value of the wage differential plus the normal return to capital. The excess returns are implicitly paid by the Chinese workers accepting the low but rising real wage. Indeed, from the US balance sheet perspective, there is no real export of capital from the US to China. All is financed by forced Chinese savings, both the US current account deficit and the onshore loans to the foreign investor. The US balance sheet taken as a whole simply intermediates between low yielding Chinese deposits and high yielding FDI investments.

But perhaps this method of local intermediation is too transparent and difficult politically. Instead, the government could sell the same domestic security mentioned above but, rather than make a loan to a direct investor, purchase international reserves in the direct investor's home credit market. This acquisition of foreign assets favors the importing country in general rather than just the foreign investor. The foreign investor then has to borrow in the importing country at his own normal cost of funds, and then buy yuan to make the investment. Part of the subsidy to the foreigner is then given to the importing country as a whole, part to the FDI investor in the form of rents from access to low real wage labor. Again, no real capital flows from the US to China—both the US current account deficit and the measured FDI outflow are financed by Chinese savings. Whether it is booked as FDI or investment managed by foreigners is irrelevant.

Politically, this is perhaps better because there is an arms length relationship between the government and the foreign investor. With this more competitive mechanism we would expect that the surplus generated by access to low wages in China would be absorbed by adjustment costs. In this case direct investors from countries with open import markets might enjoy a competitive advantage over other foreign and domestic investors because they can more effectively mobilize profits to make transfer payments to their fellow residents.

At this point we do not understand well the mechanism that allocates investment in the export sector, its profitability or the distribution of those profits. It is also quite possible that direct investment is restricted and/or the risk that the regime might end prematurely requires excess profits in order to insure entry. The net profitability of direct investment is an important ingredient in the evolution of net international investments positions during the transition. Data on profitability of direct investment in China is anecdotal at best. We can make a reasonable guess about the gap between the real wage and marginal product of labor, but we do not have much information about the distribution of the implied surplus. This is an important topic for further research.

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[13] We refer to "foreign investors" and not "foreign direct investors" because in this example they are financed by Chinese saving intermediated through domestic balance sheets.

What about the accumulating balance sheet positions?

Headline numbers for reserve accumulation and the US current account deficits seem to suggest that the main end game problem is the accumulated net international investment position of the center and the periphery. But net positions are the difference between two much larger gross assets and liabilities. Just as in the original Bretton Woods System, official intervention, that is, large official capital outflows from the periphery are largely associated with private capital inflows to the periphery. In our view the financial intermediation and the capital gains and losses generated will substantially mitigate problems associated with the net international investment positions generated by export led growth.

At the end of the transition period the government of China will hold a large stock of US treasury and other securities on which it has earned a relatively low but positive rate of return. It will also have incurred a large stock of liabilities to domestic claimants. But at the end of the game, both of these will carry the same international interest rate. The US will hold a large stock of direct investment which pays the world equity rate going forward but which has paid a much higher rate during the adjustment interval.

It may be instructive to take another look at the end of the original Bretton Woods system with these two points in mind. While a careful historical comparison is beyond our resources at the moment it is clear that the United States did not run large trade deficits leading up to the 1971-73 crisis that ended the regime. The "balance of payments deficit" that observers focused on at the time was the liquidity balance, a concept that put short term capital inflows below the line. As Depres, Kindleberger and Salant (1966) pointed out in their celebrated letter to the *Economist*, this concept of a deficit ignores the legitimate role of financial intermediation in international financial arrangements. To be sure, financial intermediation can lead to instability and crises. But the problem is much more subtle and the "lessons" from countries that have run large and persistent current account deficits may not be of much use in evaluating the new Bretton Woods.

Conclusions

What makes this perpetual motion machine run is, of course, the assumed zero (actually negative) product of the pool of excess labor that we are implicitly associating with the outcome of a market-determined real exchange rate and allocation of domestic and international savings. This provides a free lunch that everyone can share through current Asian policies.

We have done some simulations with plausible rates of accumulation and returns and find that the transition to the new steady state need not imply a large continuing net transfer. So the system ends with a smooth adjustment. The government of China will have a more productive capital stock and will have managed to employ 200 million people in world-level wage jobs. The US will own a nice chunk of the Chinese capital stock, and will have made a fine excess return during its accumulation. There are even mutually

offsetting cross-border claims against each other that can serve as escrow against confiscation.

During the adjustment period, many dimensions of this development program are distorted in the periphery. But one thing that is not distorted is the knowledge that at the end of the transition capital invested in traded-goods industries will have to compete on an equal basis with capital invested in other countries. We see no practical alternative to imposing this discipline on an emerging market and at the same time accelerating the absorption of a large and politically dangerous pool of labor. The feasibility of maintaining an undervalued exchange rate through monetary policy and controls on domestic and international capital markets for a long time can, of course, be questioned. But this is an empirical question. At the moment we do not see a mechanism in the case of China for significant circumvention of their financial arrangements and regulations.

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