Dollar Adjustment: How Far? Against What?

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Overview: Designing a Dollar Policy

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The primary goal of the Institute's conference on dollar adjustment, held in Washington on May 25, 2004, was to assess the progress that has been made in correcting the sizable misalignments of key national currencies that had developed in the late 1990s and early 2000s. It also sought to aid understanding of the needed adjustment process and contribute to its promotion. To further these objectives, the conference drew on a number of recent analyses from around the world.

Developments since 2002

This conference was a sequel to an earlier conference held at the Institute on September 24, 2002, which tried to estimate the magnitude and explore the implications of the dollar overvaluation that had developed in the preceding years (see Bergsten and Williamson 2003).

At that time, the dollar had declined by a trade-weighted average of about 5 percent from its peak in early 2002, after rising by an average of 35 to 50 percent from its lows in 1995 (table 1.1). One result of that prolonged dollar appreciation (together with faster growth in the United States than in its main trading partners) was a sharp rise of the US current account deficit to about $550 billion, or 5 percent of GDP. Indeed, the deficit hit a record level in April 2004, as was announced just before the update conference. Catherine L. Mann (2004) is now projecting a renewed and progressive increase in the deficit in the absence of further major changes in relative growth rates and exchange rates or both.

Table 1.1 Movements in the dollar exchange rate, 1995–2004

Movement	Federal Reserve broad nominal index	Federal Reserve broad real index[a]	Dollar-euro[b]	Yen-dollar[c]
1995 low	89.0 (May 8, 1995)	84.7 (July 1995)	1.35 (July 28, 1995)	81.1 (April 19, 1995)
1995–2002 high	130.1 (February 27, 2002)	113.6 (February 2002)	0.83 (October 26, 2000)	147.1 (August 11, 1998)
2002 low	122.4 (July 22, 2002	108.5 (July 2002)	0.86 (January 31, 2002)	115.7 (July 16, 2002)
Value at time of 2002 conference	127.1 (September 24, 2002)	110.6 (September 2002)	0.98 (September 24, 2002)	123.4 (September 24, 2004)
2004 low	111.6 (January 9, 2004)	98.5 (January 2004)	1.29 (January 9, 2004)	103.7 (April 1, 2004)
Value at time of 2004 conference	116.8 (May 25, 2004)	102.9 (May 2004)	1.21 (May 25, 2004)	112.2 (May 25, 2004)
Appreciation (1995 low to 1995–2002 high, percent)	46.1	34.2	62.7	81.5
Depreciation (1995–2002 high to 2004 low, percent)	14.2	13.4	35.6	29.5
Appreciation (2004 low to 2004 conference, percent)	4.7	5.5	6.1	8.2

a. Data were available only on a monthly basis.
b. This is the 1995–99 synthetic euro exchange rate, based on the weighted average of initial euro area member states.
c. Latest available data.

Sources: IMF, *International Financial Statistics*; Federal Reserve Board; Pacific Exchange Rate Service.

The earlier conference addressed four central issues. First, there was unanimous agreement among the participants that further depreciation of the dollar was needed to achieve a sustainable relationship among national currencies and current account positions. The participants also observed that there were two important advantages in achieving this realignment promptly. One was the presence of considerable slack in the US economy, which meant that the dollar could decline without much (if any) adverse impact on US inflation and interest rates. The second was the superiority of US economic performance relative to other industrial countries, which reduced the risk of capital flight from the United States and thus of a dis-

orderly dollar depreciation that could lead to a "hard landing" for the US and world economies.

Second, there was considerable disagreement among the participants on the magnitude of the further decline needed in the dollar. Estimates ranged between 10 and 25 percent, centering on 20 percent. These differences, in turn, mainly reflected varying views on the sustainable level of the US current account deficit, which ranged between 2 and 4 percent of US GDP.

The third issue was the distribution of the further dollar depreciation among counterpart currencies. There was widespread agreement among the participants that the adjustment needed to range considerably beyond Europe and Japan, against whose currencies most of the depreciation until then had occurred. In fact, there was considerable debate over the proper direction of future movements of the yen, with some arguing for renewed depreciation in light of the fragility of the Japanese economy and others strongly criticizing Japan's sizable interventions to limit further appreciation of its currency.

The corollary of these views was that additional countries needed to become important participants in the global adjustment effort. Though there was some mention of Canada and, less convincingly, Mexico as potential candidates, the main focus was on Asia, particularly China. Many participants argued that China needed to abandon its fixed exchange rate against the dollar in light of its sizable surpluses and rapid accumulation of foreign exchange reserves. Moreover, China's failure to move against the dollar had deterred many of the other Asian countries, which see China as one of their main competitors, from letting their currencies appreciate against it as well. Hence a large part of the world economy and trading system—and a major component of the counterpart external surpluses to the US deficit—had not participated in the adjustment process.

The fourth issue was how to promote the needed further adjustment among the key currencies and current account imbalances. No participant advocated a deliberate slowdown in US economic growth. Everyone supported an acceleration of growth in the surplus countries, though no one argued that this would suffice to restore equilibrium. Some argued that further appreciation of those countries' currencies would spur the reforms they needed to achieve faster expansion.

There was considerable discussion, and much disagreement, on whether sterilized intervention in the currency markets represented an additional policy instrument to influence exchange rates. The only widespread agreement was that countries should avoid intervening in ways that prevent market forces from pushing rates in equilibrating directions. In particular, concern was expressed about the aggressive intervention in the currency markets that a number of these countries, especially Japan and China, had used to block appreciation of their currencies.

The dollar resumed its decline about a month after the 2002 conference. As table 1.1 shows, by early 2004 it had come down by a trade-weighted average of about 15 percent on the Federal Reserve's broad real exchange rate index.[1] During the same period, it fell by 33 percent against the euro and by 23 percent against the yen. The decline had been gradual, orderly, and consistent with a strong recovery of both the US and world economies. Presumably as a result of the dollar's decline, the US current account deficit stopped growing in mid-2003 and remained relatively stable for the succeeding months, despite a sharp pickup in US economic growth that would otherwise have been expected to produce a further increase in the imbalances. As was noted above, however, signs of a renewed increase in the deficit emerged just before the May 2004 conference, and at least some projections indicate that a large, progressive increase is likely.

From early 2004 on, the dollar's decline stalled out and, to some extent, was reversed. As of May 25, the date of the conference, the dollar had appreciated by about 4½ to 5 percent on the Fed's broad indexes after hitting its most recent low in early January. Hence the net decline of the dollar, from its high point in early 2002, was now only about 10 percent. As at the earlier conference, a key point in the latest discussion was that the dollar's decline had to some extent been reversed during the preceding months. This change in the markets had begun to raise the question of whether the dollar's decline was over or might even have started to be reversed on a lasting basis. The US economy is growing strongly, and interest rates are expected to move up during the next couple of years. Conversely, the current account deficit had not begun to decline and may even be increasing again. Moreover, much more policy attention had been paid to the impact of the external deficit on employment since the previous conference, particularly as the "jobless recovery" continued through 2003. In the six weeks following the conference, there was a renewed though modest decline in the dollar.

On the policy front, there had been much focus on the intervention question during 2003 and 2004. Secretary of the Treasury John Snow went to Asia in September 2003 to talk explicitly about the issue in Tokyo and Beijing. President George W. Bush reportedly raised it with Premier Wen Jiabao on his visit to the United States in December 2003. The Group of Seven (G-7) issued three communiqués, starting in Dubai in September 2003, which addressed the need for greater flexibility of exchange rates by countries whose rates do not now flex. There has been continuing pressure from Congress, most recently on May 19, 2004, at a hearing of the Senate

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1. The table does not include the IMF's real effective exchange rate index, which shows a larger decline, because it is understood that IMF staff have become concerned that the weighting system in this index has become outdated (especially for the dollar). The subject is currently under study.

Banking Committee. What was said at the Institute's earlier conference about reducing the amount of intervention clearly had no effect: China's intervention in 2003 exceeded the total amount of its GDP increase in that year, and Japan's intervention in the first quarter of 2004 was sufficiently large to more than finance the entirety of the US budget deficit or the US current account deficit in that period.

Against this background, the second conference convened in May 2004 to update the discussion of 20 months earlier and to again discuss some of the same questions: Does the dollar need to resume its decline in order to achieve a sustainable current account position for the United States and the world? If so, by how much? Against which currencies? And how should that be achieved—particularly if market pressures head in the other direction? What course of action could lead to a renewed decline of the dollar if that were desired?

How Large a Dollar Decline?

The first step in deciding how much of a dollar decline is needed is to address the question: What does a decline need to achieve? The larger the improvement that is sought in the US current account balance, the larger the dollar's decline will need to be. If one sees no danger in a progressively increasing US current account deficit, which according to the projections of Mann (2004) is likely to exceed 10 percent of GDP by 2010 on present trends, then no decline in the dollar is needed. Conversely, if one thought it necessary to avoid any current account deficit or to convert the deficit into a surplus, then a substantial dollar depreciation—or else a drastic recession in the United States that was not matched in the rest of the world—would be needed. Because no one at the conference declared a wish to see the United States pushed into recession to cure the deficit,[2] the needed dollar depreciation is linked to the size of the desired improvement in the US current account.

The first paper given at the conference, by John Williamson (which will appear in the forthcoming volume, *Dollar Adjustment: How Far? Against What?*, as chapter 2), asserts that a reasonable target would be to halve the current account deficit during the next three years or so. No rigorous justification for an objective of exactly this size is offered, but he argues that deficits of the present size result in an explosive growth of the US ratio of foreign debt[3] to GDP, whereas a deficit of half that size would

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2. Indeed, some people would argue that a US recession would in practice lead to severe recessions elsewhere rather than to an improvement in the US current account.

3. Actually, the relevant magnitude is not strictly speaking "debt" but the US net international investment position (which includes foreign direct investment and other equity-type assets and liabilities).

be consistent with stabilization of this ratio at a value of around 40 percent (see chapter 5).

In Ellen Hughes-Cromwick's comment on Williamson's argument (which appears as a comment to part II of the book), she asks how long a deficit of the present size might be sustainable, and what reason there is for thinking that deficits of the present size are unsustainable. Mann (2003) tried to address those questions in a paper for the Institute's earlier conference, and she ended up with a rather agnostic assessment that although the large share of US assets in global portfolio wealth might suggest pressure for depreciation, the continuing outlook for relatively high returns in the United States might make appreciation more likely. Her new work, however, suggests that the prospective growth of the current account deficit at the present exchange rate, or even with a modest future depreciation of the dollar, is so substantial as to make a drastic depreciation at some stage virtually inevitable (Mann 2004).

Hughes-Cromwick also asked just what deficit might be sustainable—a question to which it is not possible to give a satisfactory answer. Everyone agrees that a permanent increase in the debt/GDP ratio is not conceivable. This does not imply that one can place any definite limit on the duration of deficits of the current size, but it does suggest that, the higher the debt/GDP ratio climbs, the more likely is a forced, abrupt ending. For this reason, many analysts conclude that it makes sense to try to secure a relatively early end to the increase in the debt/GDP ratio.

Michael Mussa's paper (chapter 5) also hypothesizes a reduction of the US current account deficit to around 2 percent of GDP during the next few years, on the ground that a much higher figure would increase the likelihood of crisis. He analyzes the policy adjustments that would need to be made to accommodate such a change without damaging the world economy. These include a further substantial depreciation of the dollar, on the order of 20 percent. A significantly less extreme view on this issue was offered by Jim O'Neill in his comment on the first session of the conference (appearing in the volume at the end of part II), in which he suggests that a further 10 percent depreciation, similar to what had already occurred, might suffice.[4]

The main challenge at the conference to the contention that it is urgent to cut the US deficit was mounted by Peter Garber, one of the authors of a series of recent Deutsche Bank studies that have described present international monetary arrangements as a revived Bretton Woods system

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4. Even this is more than his own Goldman Sachs dynamic equilibrium exchange rate (GSDEER) model is indicating; this model, which attaches much significance in driving exchange rates to the strong productivity performance of the United States, actually estimates that the US dollar is currently somewhat undervalued. But his central estimate of the dollar's equilibrium value at the present time does not correspond to the result given by the GSDEER model.

(e.g., see Dooley, Folkerts-Landau, and Garber 2003; Garber's conference contribution appears as a comment on part III). These studies argue that China is following the Japanese model of the 1960s in giving priority to absorbing labor in the production of exports, which requires a highly competitive exchange rate. If the cost of doing that is a large accumulation of low-yielding reserves, it is a price that China (like other Asian countries) is willing to pay; the end result is much preferable to the premature exhaustion of growth that occurred in Latin America, where exchange rates were by and large allowed to respond to market forces. An incidental but highly significant result is that the United States has its current account deficit financed in a stable and reliable way by the reserve accumulation of China and other Asian countries. The process is likely to continue for as long as China has excess labor to absorb, which means at least for the next decade, after which India will take over.

The counterargument (posed by John Williamson in chapter 2) does not deny that China gains enormously by the ability to absorb its surplus labor in the production of exports but asks what China thinks it gains by locking up the resulting earnings in low-yielding dollar reserves when it has large unmet needs for increased consumption. It could cool its overheating economy in a way that would strengthen rather than undermine its capacity for future growth by some expenditure switching toward foreign-produced goods.

Apart from Garber's objection, the notion that the objective should be to cut the US current account deficit by something like half seemed to be generally accepted at the conference. No one disagreed that this implies a need for substantial further dollar depreciation. The paper that deals primarily with how large that depreciation might need to be is that of Simon Wren-Lewis (chapter 3). He uses a model similar in spirit to the one he previously employed in estimating fundamental equilibrium exchange rates (FEERs) for the Institute (Wren-Lewis and Driver 1998) and in informing the UK Treasury for its assessment of entry to the euro. However, this new model directly estimates equilibrium bilateral values for the main currencies rather than the overvaluation of the dollar on an effective basis, so his results are most appropriately presented along with others in the next section.

Another paper considered at the first session of the conference—which did yield inter alia estimates of dollar overvaluation—is that by Agnès Bénassy-Quéré and her colleagues (chapter 4). They use a panel cointegration approach to estimate equilibrium exchange rates for almost all the Group of Twenty (G-20) currencies. These are not FEERs but the real rates to which actual real exchange rates had tended to return during the estimation period of 1980–2001. They assume that the relationship between the equilibrium exchange rate and its underlying determinants (net foreign assets and relative prices, measured by the ratio of the con-

sumer price index to the producer price index as a proxy for the relative price of nontradables) is the same for every country. On this assumption, the dollar was overvalued in 2001 by 14 percent, with only the United Kingdom (16 percent) and Mexico (26 percent) higher, although Argentina (13 percent) was also in the same range (see table 4.2). The significantly undervalued currencies were those of Turkey (11 percent), Canada (15 percent), China and India (both 16 percent), Euroland (17 percent), South Korea (28 percent), Indonesia (31 percent), and South Africa (33 percent). Because the dollar depreciated by about 10 percent up to the date of the conference, this analysis also suggests that it has already had most of the needed adjustment.

Michael Mussa is more hawkish on the size of the needed exchange rate changes than other authors. He suggests that even bilateral rates of $1.35 to $1.45 per euro, $1.90 per pound, $0.85 per Canadian dollar, ¥85 to ¥90 per dollar, and a Chinese appreciation of 15 to 25 percent against the dollar might not be quite sufficient to reach his target of a 30 percent real dollar depreciation from the average of mid-2000 to mid-2002.

The usual fear is that a forced end to the debt buildup caused by a refusal of the rest of the world to finance increases in US indebtedness would lead to an abrupt ("disorderly") decline in the value of the dollar. If this decline were large enough, and especially if it occurred at a time when the US economy was close to full employment, it could ignite severe inflationary pressure in the United States. The Federal Reserve might seek to counter this pressure by raising interest rates, and in any event the market would be sure to push longer-term rates up, which together might push the economy into recession. Conceivably, the higher interest rates would spill over to the rest of the world, although the concern of other countries to limit the appreciation of their currencies might prevent such imitation and thus a general world recession.

Another route from an abrupt dollar decline to world recession is conceivable, however, and could operate even if the United States is not subjected to inflationary pressure leading to higher interest rates. This could occur simply because other countries did not react to dollar depreciation by expanding their domestic demand in response to the shift in demand away from them and toward the United States that would be induced by the depreciation. This is perhaps the most likely channel through which a dollar collapse could induce a world recession.

US inflation and world recession are not the only perils posed by the growth of the US deficit resulting from an overvalued dollar. Another danger is an intensification of protectionist pressures in the United States. If increasing imports and stagnant exports continue to cause large and increasing current account deficits, one would have to expect protectionist actions to be magnified and unimpeded by strong counterpressures by exporters perceiving a threat to their continuing success. The burst of

protectionist moves against China during 2003 and 2004 is the latest manifestation of this traditional relationship.

In their paper (chapter 6), Martin Baily and Robert Lawrence set out to estimate the contribution of the increase in the trade deficit to the recent loss of jobs in the United States. They use two methods to make this estimate and argue that the true figure will lie between a low estimate of 250,000 jobs lost and a high of 600,000. They thus conclude that only a moderate fraction of the total of about 2 million jobs lost during the period 2001–03 was trade related (and even this arose principally because of export weakness rather than a surge in imports). They also examine the data on offshoring and conclude that it was responsible for an even smaller proportion of job losses. These findings suggest that increased protection is not a rational response to large trade deficits, but it is not clear that this also provides assurance that it is an unlikely response.

Which Currencies Should Appreciate Against the Dollar?

Knowing that the dollar needs to depreciate more is only the starting point. It has very different implications for the counterpart countries whether a given dollar depreciation is accomplished by appreciation of the euro or the Asian currencies. The presumption going into the conference was that most of the adjustment vis-à-vis the euro had already taken place, so that the big remaining disequilibrium was in the exchange rates of a number of the Asian currencies. This original hypothesis was confirmed and also quantified in the course of the conference.

Table 3.2 in Wren-Lewis's chapter presents estimates of the dollar exchange rates of the euro, the yen, and the pound that would generate various current account positions. The objective that was hypothesized above was a halving of the US current account deficit, which was 4.6 percent of GDP in 2002. Table 3.4 suggests that this goal would be consistent with the euro being in the range $1.15 to $1.20, the yen between ¥95 and ¥100 to the dollar, and the pound sterling around $1.60. Table 3.7 looks at China and gives an estimate of 6.47 renminbi to the dollar as the exchange rate needed to achieve a balanced current account (versus the current pegged rate of 8.28 renminbi, implying the need for an appreciation of 28 percent). Of course, Wren-Lewis's model would estimate that an even larger appreciation would be needed if the objective were to achieve a current account deficit to balance the capital inflow in China, as Morris Goldstein hypothesizes in his paper (chapter 9).

Bénassy-Quéré and her colleagues also develop estimates of bilateral equilibrium exchange rates. Their estimates depend to some extent on which currency is used as the numeraire, but in the end they use the euro. (For most currencies, this has little effect on the results, though the euro

itself was in virtual equilibrium in 2003 using the euro as the numeraire, whereas it was still some 8 percent undervalued if the dollar was used as the numeraire[5]).

Assuming that the equilibrium exchange rate had not changed in real terms since 2001, the estimated misalignments in 2003 ranged downward from a massive 88 percent undervaluation of the Argentine peso to 44 percent for the Chinese renminbi, 35 percent for the Korean won, 28 percent for the Indian rupee, 27 percent for the South African rand, 23 percent for the Brazilian real, 19 percent for the Japanese yen and the Indonesian rupiah, and 7 percent for the Canadian dollar. The Mexican peso (14 percent), pound sterling (11 percent), Australian dollar (7 percent), and Turkish lira (6 percent) were estimated to be overvalued with respect to the dollar.

The afternoon session was mainly devoted to considering the impact of a major dollar realignment on the principal regions of the world economy. To start with Euroland, the main message of the presentation that Jean Pisani-Ferry made at the conference is that the eurozone believes that its former undervaluation against the dollar has already been eliminated.[6] This is consistent with the results presented by Wren-Lewis and Bénassy-Quéré et al. Pisani-Ferry also made the point that in the past, exchange rate adjustment has tended to be helpful to the United States in its conjunctural policy, with the dollar strengthening when the economy was strong in the late 1990s. Much the same has been true in Japan, where the depreciation of the yen has helped mitigate deflationary pressures in some recent years. But the opposite has been true for Euroland, where the fluctuations of the floating dollar-euro rate have tended to amplify rather than mitigate the cycle. A simulation on the NIGEM model that froze G-3 exchange rates at their 1995 levels confirmed that this would have amplified cyclical fluctuations in the United States and Japan but moderated them in Europe. However, a change in the dollar-euro rate has an asymmetrical impact on the different economies that constitute Euroland, which should in principle be addressed by asymmetrical responses of fiscal policy, which were evident to a limited extent in France but not elsewhere. Hence any further changes in the dollar-euro rate would be likely to create further difficulties within Europe and would further test the institutions of monetary union.

Paul Masson's paper on Canada (chapter 7) was included because the previous conference had suggested that the Canadian dollar was one of the additional currencies that would need to appreciate against the US

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5. They explain this by noting that in their multilateral calculations the amount of euro undervaluation in 2001 is less than the amount of dollar overvaluation. Hence, neglecting euro undervaluation in effective terms (i.e., taking the euro as the numeraire) leads to less euro undervaluation against the dollar than when the dollar's effective overvaluation is neglected.

6. Unfortunately, there is no written version of his presentation included in the volume.

dollar. Canada is the United States' largest single trading partner, so an appreciation of the Canadian dollar is potentially important in achieving the depreciation of the US dollar. Moreover, though Canada has historically had large current account deficits, in recent years it has moved into a substantial current account surplus (2 to 3 percent of GDP), suggesting that it might also have the balance of payments space to accommodate a sizable appreciation.

Masson points out that the Canadian dollar had already experienced a sharp appreciation of about 22 percent in the course of 2003. This is even larger than the euro's 20 percent appreciation, though still not as large as the moves in the Australian and New Zealand dollars. But after peaking in January 2004, the Canadian dollar had depreciated again by about 9 percent by the time of the conference.[7] Masson presents forecasts that assume the Canadian dollar will stabilize at a rate of 75 US cents per Canadian dollar, intermediate between its peak in January (almost 79 US cents) and its value at the time of the conference (about 72 US cents). On that assumption, his model suggests that Canada is likely to experience relatively subdued growth and inflation in both 2004 and 2005, largely reflecting the lagged effects of the 2003 appreciation. A further 10 percent appreciation[8] would lead to distinctly sluggish growth, which could be offset only to a modest extent by a 1 percent cut in the Canadian interest rate. Masson obviously thinks it is good that this development is (in his view) highly improbable. (He did not see Mussa's suggestion that the Canadian dollar needs to appreciate to 85 US cents.)

Takatoshi Ito contributed a paper about Japan and the yen (chapter 8). Models that ask what would be necessary for Japan to reduce its current account surplus to reasonable levels have tended for years to suggest that the yen needs to appreciate to under ¥100 per dollar, and as noted above this was true of both Wren-Lewis's model (between ¥90 and ¥100) and that of Bénassy-Quéré and her colleagues (which showed a bilateral undervaluation of 19 percent in 2003, when the yen rate averaged ¥116). The big question, which arose at the earlier conference, has for a long time been whether such an appreciation would be appropriate for a country mired in an intractable recession.

Ito expresses optimism that the long period of recession in Japan is now coming to an end and that the prospects for growth are much better than they have been for a while, although he cautions that price deflation is not yet securely over. He also notes a sharp yen appreciation as among the downside risks that could bring the expansion to an abrupt halt. He

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7. Canada is a relatively easy country to analyze, because its trade is so overwhelmingly dominated by the United States that one does not need to bother unduly with the usual distinctions between bilateral and effective exchange rates.

8. The model assumed that this appreciation would be caused by an exogenous portfolio shift.

discusses the large interventions between early 2003 and March 2004, and he suggests that these were probably motivated by exactly such a fear. Foreign criticism of these interventions led to their withdrawal for a couple of weeks in September 2003 and may also have been instrumental in the cessation of intervention in March 2004, although he argues that this was primarily a consequence of the authorities deciding that they could afford to stop intervening because the market pressure for yen appreciation had vanished. He does not suggest that the Japanese authorities would as yet be prepared to acquiesce happily in an appreciation as large as that implied by the models of Wren-Lewis or Bénassy-Quéré, although he does make the point that the long period of deflation in Japan means that a yen below 100 to the dollar is no longer as strong in real terms as formerly.

Ito acknowledges that the rapid growth in trade with China and other Asian countries means that the dollar exchange rate is less crucial for Japan than in former times and that the effective exchange rate has correspondingly gained in policy salience. The same is true of many of the other Asian economies, which is one reason why the fixed renminbi-dollar exchange rate attracted so much attention at the conference.

Goldstein's paper is based on his work with Nicholas Lardy addressing the issue of the renminbi (or yuan) directly. He outlines two approaches to calculating whether the renminbi is misaligned. The first is the "underlying balance approach," which involves comparing normal capital flows with the underlying (adjusting for cyclical and temporary factors) current account surplus. This suggests that China needs to engineer a current account adjustment of about 4 percent of GDP, which an elasticities-based model suggests would require a real appreciation of 20 to 30 percent.

Goldstein's second approach starts from the size of the world disequilibrium and the hypothesis that correcting this would require a dollar depreciation on the order of 25 percent from the time when the dollar hit its peak. He argues that China has aggravated the problem until now by riding the dollar down, whereas it is in at least as strong a position to contribute positively as any other country. Thus both of Goldstein's estimates of the Chinese undervaluation are somewhat less than those of Wren-Lewis and of Bénassy-Quéré and her colleagues.

According to standard analysis (although not according to the ultra-Keynesian analysis of Garber and his colleagues at Deutsche Bank, which assumes away supply constraints), such a revaluation of the renminbi would be in China's interest as much as that of the rest of the world. This is not a "dilemma" case, in which an exchange rate change that would push the country toward external equilibrium would worsen its position with regard to "internal balance."

On the contrary, the Chinese economy has been overheating. Some Chinese observers talk of the inflation this is inducing as part of the adjustment process, for if left to run its course it will induce a real appreciation

just like a nominal appreciation would. However, official Chinese policy has sought to end the overheating and thus cut short the inflation, which is what most of the conference participants regard as a sensible way to conduct macroeconomic policy. We believe that revaluing the renminbi would be a much better policy than the mandated credit restraint that has actually been used to combat this overheating, not only because it would use market incentives rather than require their suppression to be effective, but also because it would combat overheating by enlarging supply by increasing import availability as well as curtailing (export) demand.

Goldstein also argues that the large speculative capital inflow being attracted by the renminbi's undervaluation is particularly dangerous to China because it is feeding the rapid credit growth that is almost sure to be generating a new wave of bad loans by the commercial banks. Others added that its refusal to revalue is dangerous to China because it is likely to generate protectionist reactions, as we have already seen extensively in the United States (for apparel, television sets, furniture, etc.). In the worst case, this could stop the Chinese export expansion in its tracks. Even short of this, it could undermine the ability of the Chinese leadership to use the country's integration with the world trading system to promote its agenda of policy reform.

Still another point noted by Goldstein is that the renminbi exchange rate is seen as crucial by many other Asian economies, such as Hong Kong, Indonesia, Korea, Malaysia, the Philippines, Singapore, Taiwan, Thailand, and even India and Japan—all important competitors of (as well as suppliers to) China. Because of this relationship with China, they are reluctant to allow their currencies to appreciate ahead of the renminbi. Even excluding Japan, Williamson's table 2.1 shows that only just over a third of the current account adjustment of Asia would be absorbed by China under his scenario.[9] Goldstein (2003) estimated that if there was a 20 percent revaluation of the renminbi and a 10 percent revaluation of the other Asian currencies (excluding Japan's), the US deficit might be cut by about $50 billion.

In the light of these facts, it really is not very relevant to say that no conceivable change in China's multilateral balance can be expected to offset more than a small proportion of the needed improvement in the US current account: It does not need to. If China is the critical blockage preventing a general adjustment of Asian exchange rates, and the bulk of additional adjustment needs to be against Asia, then the fixed renminbi-dollar rate is *the* biggest obstacle to a successful adjustment.

Table 1.2 assembles relevant data for each of the main Asian economies. The first two columns give two alternative measures of the size of each economy: (1) its GDP (converted at market exchange rates) and (2)

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9. Unfortunately, there is no written version of his presentation included in the volume.

Table 1.2 Economic data for main Asian economies

Country	Period	GDP (billions of dollars, market rates)[a]	Merchandise exports, share of world total (reexports included)[b] (percent)	Total weight in Fed broad exchange rate index[c] (percent)	Current account balance (percent of GDP)[a]	Current account balance (billions of dollars)[a]	Total reserves, minus gold/total imports[d] (percent)	Bilateral appreciation in nominal exchange rate from dollar high in January 2002 to May 25, 2004[e] (percent)	Change in IMF REER value from January 2002 to March 2004 (most recent data)[f] (percent)
China	2000	1,080.8	3.9	7.8	1.9	20.5	64.5		
	2001	1,175.8	4.3	8.7	1.5	17.4	76.3		
	2002	1,266.1	5.0	9.8	2.8	35.4	85.3	–0.0	–11.5
	2003	1,409.9	5.9	9.8	2.1	29.6	87.5		
	2004(p)	1,583.2	n.a.	9.8	1.6	25.0	n.a.		
Hong Kong	2000	165.4	3.1	2.4	4.3	7.1	45.1		
	2001	162.8	3.1	2.4	6.1	9.9	49.1		
	2002	161.5	3.1	2.0	8.5	13.7	48.1	0.1	n.a.
	2003	158.6	3.0	2.0	11.0	17.4	46.2		
	2004(p)	163.4	n.a.	2.0	10.3	16.9	n.a.		
India	2000	460.8	0.7	0.9	–1.1	–5.1	53.0		
	2001	473.8	0.7	1.0	–0.2	–0.8	62.3		
	2002	492.6	0.8	1.1	1.0	4.8	85.2	6.6	n.a.
	2003	575.3	0.8	1.1	0.5	3.0	110.7		
	2004(p)	635.6	n.a.	1.1	0.2	1.3	n.a.		
Indonesia	2000	150.2	0.8	1.0	5.3	8.0	59.0		
	2001	143.2	0.9	1.0	4.8	6.9	58.5		
	2002	173.4	0.9	1.0	4.5	7.8	64.3	11.6	n.a.
	2003	208.3	0.9	1.0	3.9	8.0	n.a.		
	2004(p)	228.8	n.a.	1.0	2.9	6.7	n.a.		

Japan	2000	4,748.7	6.4	12.8	2.5	119.6	71.7		
	2001	4,163.1	6.3	11.6	2.1	87.8	86.6		
	2002	3,973.4	6.5	11.1	2.8	112.7	103.9	16.6	1.3
	2003	4,301.8	7.6	11.1	3.2	136.4	134.6		
	2004(p)	4,612.0	n.a.	11.1	3.1	144.0	n.a.		
Korea	2000	511.7	2.7	4.2	2.4	12.2	49.7		
	2001	481.9	2.0	3.7	1.7	8.0	59.2		
	2002	546.9	2.5	3.9	1.0	5.4	64.8	11.4	n.a.
	2003	605.4	3.1	3.9	2.0	12.3	71.4		
	2004(p)	656.0	n.a.	3.9	1.5	9.5	n.a.		
Malaysia	2000	90.2	1.5	2.3	9.4	8.5	30.0		
	2001	88.0	1.2	2.1	8.3	7.3	33.7		
	2002	94.9	1.4	2.3	7.6	7.2	35.6	0.0	−16.0
	2003	103.2	1.6	2.3	11.1	11.4	45.7		
	2004(p)	110.2	n.a.	2.3	10.9	12.0	n.a.		
Philip-pines	2000	74.8	0.6	1.3	8.4	6.3	30.1		
	2001	71.0	0.5	1.1	1.9	1.3	33.5		
	2002	76.8	0.5	1.2	5.5	4.2	31.7	−8.2	−18.3
	2003	79.2	0.6	1.2	2.1	1.7	30.8		
	2004(p)	82.7	n.a.	1.2	1.6	1.3	n.a.		
Singapore	2000	92.6	2.2	2.4	14.3	13.2	49.7		
	2001	86.0	1.9	2.2	18.7	16.1	52.8		
	2002	88.3	1.7	2.2	21.4	18.9	57.1	7.4	−6.5
	2003	91.3	2.2	2.2	30.9	28.2	61.7		
	2004(p)	99.5	n.a.	2.2	28.0	27.9	n.a.		

(table continues on next page)

Table 1.2   Economic data for main Asian economies *(continued)*

Country	Period	GDP (billions of dollars, market rates)[a]	Merchandise exports, share of world total (reexports included)[b] (percent)	Total weight in Fed broad exchange rate index[c] (percent)	Current account balance (percent of GDP)[a]	Current account balance (billions of dollars)[a]	Total reserves, minus gold/total imports[d] (percent)	Bilateral appreciation in nominal exchange rate from dollar high in January 2002 to May 25, 2004[e] (percent)	Change in IMF REER value from January 2002 to March 2004 (most recent data)[f] (percent)
Taiwan	2000	309.4	2.3	3.7	2.9	8.9	64.4		
	2001	281.2	2.0	3.1	6.4	17.9	93.4		
	2002	281.9	2.1	3.0	9.1	25.6	118.5	4.6	n.a.
	2003	286.0	2.0	3.0	10.0	28.6	135.3		
	2004(p)	309.0	n.a.	3.0	7.3	22.5	n.a.		
Thailand	2000	122.7	1.1	1.5	7.6	9.3	41.4		
	2001	115.5	1.1	1.5	5.4	6.2	42.5		
	2002	126.9	1.1	1.4	5.5	7.0	46.8	7.6	n.a.
	2003	143.2	1.1	1.4	5.6	8.0	43.8		
	2004(p)	162.3	n.a.	1.4	4.4	7.1	n.a.		

n.a. = not available
(p) = projection
REER = real effective exchange rate

a. Data from IMF, *World Economic Outlook* database, April 2004.
b. Data from WTO, Total Merchandise Database.
c. Data from the Federal Reserve.
d. Data from the WTO; IMF *International Financial Statistics*, July 2004; and Central Bank of China. Data on Taiwan are for foreign exchange reserves only.
e. Data from the Pacific Exchange Rate Service.
f. Data from the IMF, *International Financial Statistics*, July 2004.

its visible exports as a percentage of the global total. The third column shows the percentage of the Federal Reserve index of the dollar's broad (i.e., effective) exchange rate accounted for by each economy. The fourth and fifth columns show each economy's average current account balance since the new millennium started (1) as a percentage of its GDP and (2) in dollars. The sixth column shows each economy's year-end level of reserves deflated (as is conventional) by its level of imports. The last two columns show two measures of the change in each economy's exchange rate from the dollar's peak in January 2002 until the date of the 2004 conference: (1) the nominal bilateral exchange rate against the dollar and, where available, (2) the real effective exchange rate.

The table confirms that these economies account for a sizable part of the world economy and also of the dollar's effective exchange rate. All have current account surpluses, and most have reserves well above the conventional safety level of 25 to 35 percent. With the possible exception of the Philippines, they have ample scope to accept a deterioration in their current account balances. Yet, while only the Philippines has depreciated in nominal terms against the dollar since the dollar's peak, several others have held their bilateral dollar rates constant. Except for Japan, most of those that have accepted appreciation in their dollar rates have kept it modest (at best, just reaching double digits). The result is that all these economies except Japan for which we have data on changes in real effective exchange rates have depreciated in real effective terms, and even Japan's appreciation is negligible on this measure.

It is not an accident that changes in effective exchange rates are systematically less than those in dollar rates. This is something that would remain true in the event of a concerted Asian move to revalue against the dollar. Because these economies now trade so much with one another, a concerted revaluation by all of them against the dollar would result in much smaller appreciations in their effective exchange rates, precisely because it would not involve their losing competitiveness vis-à-vis each other. If the dollar's adjustment is not to fall far short of what is needed, the world needs such a concerted revaluation of the Asian currencies. Yet one can understand why each of these economies, including China, is anxious to avoid or limit a unilateral appreciation. This would result in their losing competitiveness vis-à-vis all their peers, and it could thus be unacceptably costly.

Concerted revaluations do not happen by themselves. Someone has to take the lead, as the G-7 did in organizing the Plaza Accord. It would be ridiculous for the G-7 to think of taking the lead on this issue, however, for only one of the relevant countries is a member. The G-20 would be better, because five of the relevant countries (China, India, Indonesia, Japan, and Korea) are members. But that still leaves out many of the countries that would need to be persuaded to participate. So the G-7 and G-20 should

simply issue a call to arms, yielding the actual work of organizing a concerted revaluation to the institution that is supposed to be responsible for overseeing the international adjustment process: the International Monetary Fund.

Unfortunately, this major IMF responsibility has been shamefully neglected for many years, and all too often the Fund acts as though balance of payments policies and exchange rates are none of its business. In our view, the IMF's main objective in the coming months should be to secure a concerted appreciation of the East Asian currencies so as to facilitate the needed adjustment of the US balance of payments without imposing an intolerable burden on any one country. If the IMF continues to ignore this need, then even its natural friends will begin to wonder whether it is worth maintaining the institution.

The Instruments of Adjustment

The standard theory of balance of payments determination points to two major systematic sets of influences on a country's current account outcome. One is the relative strength of demand at home and in the country's trading partners. The other is the exchange rate (this of course means the real effective exchange rate, i.e., the nominal exchange rate adjusted for relative inflation at home and abroad, and the weighted average of the real exchange rates against all the country's trading partners).

Several of the conference papers, especially those of Mussa and Williamson, emphasize that achieving adjustment without pushing the world economy into recession will require both restraint in the growth of domestic demand in the United States and more rapid growth in domestic demand in the rest of the world. Demand restraint in the United States will be needed to make available the real resources to reduce the current account deficit. If the Federal Reserve gets no help from the fiscal authorities in restraining demand as output approaches full employment, then it will have to raise interest rates more than would have been necessary with a more responsible fiscal policy. That may curb the weakening of the dollar and therefore thwart the adjustment process; that is one of the disadvantages of conducting macroeconomic policy with one hand tied behind the authorities' back (which is what a refusal to raise taxes or cut spending when the time comes amounts to). But because the exchange rate has a life of its own rather than being simply a reflection of monetary policy, it is still possible that adjustment will occur even if all the burden of restraining demand in the United States falls on monetary policy.

If a diversion of demand to the United States is induced by a weaker dollar and the US authorities (doubtless aided by the market in pushing up interest rates) provide the space to satisfy this by restraining internal

US demand, then maintaining world output growth will require faster growth in demand in the rest of the world. Perhaps the main reason for wanting to see an orderly fall of the dollar rather than an abrupt decline is to make it easier for other countries to undertake the demand expansion that will be essential if adjustment is to take place in a context of global prosperity rather than world recession. It is historically inaccurate to argue that all countries other than the United States have had to run large export surpluses to grow rapidly. In fact, there are instances (e.g., most of the East Asian emerging-market economies prior to the Asian crisis) of countries having used the market confidence inspired by rapid export expansion to borrow and finance current account deficits caused by an even more rapid growth in imports. That is the sort of virtuous circle that countries other than the United States will need to achieve in the next few years if the adjustment process is to succeed.

The other imperative for effecting the current account adjustment that the United States needs is to secure exchange rate changes roughly along the lines explored above: a further significant dollar depreciation (the magnitude of which we discuss again below), reflecting primarily the appreciation of the Asian currencies. If the United States were to restrain demand and other countries were to stimulate it (as described above) without a weaker dollar, the consequence would be a weak economy in the United States and the return of inflationary pressures in the rest of the world. This scenario would benefit no one. In other words, the two changes need to be phased in jointly.

That presents a problem, inasmuch as the exchange rate is no longer a policy variable, as it was under the Bretton Woods system. This issue also was debated in the Institute's 2002 conference: Is sterilized intervention a policy tool that can be used to influence the exchange rate (as it was assumed to be at the time of the Plaza Accord and in other G-7 intervention episodes)? Two very interesting papers in this volume cast new light on this issue.

In one of these papers (chapter 11), Marcel Fratzscher argues that the authorities really have two intervention instruments. Along with the purchase and sale of foreign exchange that has figured in the literature, they also have what he calls "oral intervention" (perhaps more familiarly known as "jawboning"). It seems rather commonsensical to hypothesize that if one believes that traditional intervention works by informing the market of the beliefs of the central bank about the equilibrium exchange rate (as a number of recent writers argue, labeling it the "information channel"), then a direct statement of such beliefs might also influence the market. And it seems distinctly quixotic for Robert Rubin to have gone to such lengths as he describes in his recent book (Rubin 2003, 184) to avoid statements that might disturb the market if oral intervention had no effects.

In fact, Fratzscher's careful tests find that both forms of intervention have had measurable effects.[10] He also finds very clear evidence that traditional intervention has been largely abandoned as a policy instrument by both the Federal Reserve and the European Central Bank (and its de facto predecessor, the Bundesbank) in recent years. Intervention policy now consists essentially of oral intervention, except in Asia.

In the other paper (chapter 10), Christopher Kubelec argues that intervention works increasingly well the further the exchange rate is from its equilibrium value. Governments that use intervention to try to influence the equilibrium value of the exchange rate are doomed to fail. In contrast, as the exchange rate gets carried further away from equilibrium by chartists following "technical" trading strategies, the proportion of traders starting to worry about the possibility of losing money as the rate reverts to equilibrium increases. In his formal model, an increasing number of traders find it worthwhile to invest in costly equilibrium-discovery activities (like buying research reports). Because of that, there is an increasing chance that an act of intervention will have a strategic impact in tipping the market from an errant path to an equilibrium-reverting path. His empirical tests suggest that intervention indeed becomes more effective as the central bank tries to combat a larger misalignment.

Martin Evans, one of the pioneers of the new micro modeling of the foreign exchange market, commented on the papers by Fratzscher and Kubelec (his comment appears at the end of part IV). He outlines how this type of model works and confirms that in principle it would provide scope for an impact on the exchange rate of either of the mechanisms modeled by Fratzscher and Kubelec. Incidentally, Evans questions whether intervention could have these effects if the macro models of exchange rate determination told us everything there is to know about the issue. But, while acknowledging that Fratzscher had provided statistical evidence that oral intervention is effective, Evans questions whether the evidence really supports a significant impact, noting that in both early 1998 and early 2002 a series of statements in support of a strong dollar had no obvious impact on the dollar-euro rate. He also suggests that Kubelec's evidence is inconclusive. Nevertheless, he concedes that the findings of both researchers provide suggestive evidence that at least under some circumstances intervention can be effective.

What can one conclude about the usefulness of intervention in generating a set of exchange rates that would promote adjustment? At least three observations can be made. First, the point emphasized at the earlier conference remains valid: At a minimum, governments ought to stop intervening in a way that is designed to thwart the adjustment process. A

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10. This finding is consistent with Rubin's boast that all the interventions undertaken during his time at the Treasury Department were effective (Rubin 2003, 187).

reasonable corollary might be that the international system should include rules that place an obligation on the IMF to seek a mutually consistent view of what countries should be aiming at and then pressure them into abiding by those objectives.

Some analysts, including Goldstein in the volume, essentially argue that the IMF already has this power through the injunction against "exchange rate manipulation" in its existing Articles of Agreement. Others point out that this provision has never been interpreted to preclude pegging an exchange rate and suggest that an amendment that explicitly endorses the ability to prohibit pegging at a disequilibrium rate would be in order.

Second, if oral intervention is now the predominant way in which policy is exercised, it needs to be subject to the same international discipline as the more traditional forms of intervention. Treasury secretaries should not be free to voice their support for a "strong dollar" when the dollar is already too strong by any reasonable measure, especially once that measure has been endorsed by the IMF. If they nonetheless insist on doing so, they should be contradicted by the managing director of the IMF—just as he has indeed contradicted them on numerous occasions concerning the appropriateness of US fiscal policy. Officials need to say they favor their exchange rates moving toward equilibrium, which will sometimes mean appreciation and sometimes depreciation (and occasionally will mean no movement at all).

Third, conventional intervention should be limited to occasions when the exchange rate is misaligned and the misalignment is harming the adjustment process. Even if no guarantee can be given that intervention will be effective, it stands more chance of working under these conditions than when used to defend a disequilibrium parity.

Conclusions

In summing up the conference, C. Fred Bergsten pointed to the stalemate that the system has reached. There is general agreement that the United States needs to curb quite substantially the size of its current account deficit. Most observers acknowledge that doing this will require a sizable depreciation of the dollar. That implies a need for other currencies to appreciate against the dollar. Some currencies have already done so: the euro, the pound, the Swiss franc, the Canadian dollar, and the Australian and New Zealand dollars. (Indeed, some participants felt that several of these currencies might have overshot, although it is hard to believe that this remains true after the renewed strengthening of the dollar in early 2004.) Despite these corrections, the US dollar remains substantially overvalued.

One thing the conference did not reach agreement on is the magnitude of the current dollar overvaluation. Wren-Lewis went straight to estimates of equilibrium bilateral exchange rates, but if one weights and averages these, one would estimate on his measure that the dollar was overvalued by a little under 10 percent at the time of the conference. The figure of Bénassy-Quéré and her colleagues would seem to be about 4 percent, if one looks at their estimate of the dollar's real effective overvaluation, although weighting their estimates of bilateral misalignments with the Federal Reserve's weighting system would suggest a rather larger figure, again approaching 10 percent. O'Neill's preferred estimate would also seem to be about 10 percent.

Mussa, conversely, asserted that a further dollar depreciation of about 20 percent or more would be needed to complete the adjustment process. Mann (2004) is even more alarmist, predicting that an immediate adjustment of close to 20 percent (enough to bring the Fed's broad real index down to an index value of 85, as against its July 2004 value of 101.5) would do little more than stabilize the size of the US current account deficit. And to prevent the deficit from growing again in future years, the initial depreciation would need to be followed by a secular depreciation of about 10 percent a year (to offset the Houthakker-Magee asymmetry in the import elasticities and the growing deficit on the investment income account as the United States piles up foreign indebtedness, and to allow for an initial situation in which the value of imports vastly exceeds that of exports). What one can conclude is that the dollar is currently overvalued by at least 10 percent or so, and possibly by substantially more.

Yet the world has run out of volunteers for currency appreciation. Japan has already undertaken some appreciation, and its authorities fear that much more might derail the incipient recovery that looks as though it may finally be under way. China has a fixed nominal exchange rate with the dollar, and its officials parrot phrases about "keeping the yuan stable around a rational and balanced level" (ignoring the facts that stability in the bilateral rate against the dollar implies instability in what really matters, the effective exchange rate, and that the present rate is by no stretch of the imagination reasonable and balanced). Other Asian countries resist substantial appreciation, even when their exchange rates are nominally floating, when this would also mean losing competitiveness against China. Canada and the eurozone are both relieved that the full appreciation of 2003 did not stick. Latin American countries seem determined not to repeat their past mistake of acquiescing in overvalued exchange rates, and they may well be tempted to err in the opposite direction.

In this situation, there is an acute need to reach some measure of international understanding about a consistent set of balance of payments objectives and the resulting policy implications. Yet this is one responsibility that the IMF, the institution that is supposed to be in charge of supervising

the adjustment process, seems singularly reluctant to fulfill. The G-7 and G-20 should tell the IMF that it is high time for it to accept its responsibility to negotiate an agreed-on and mutually consistent set of current account objectives. Unless the Institute's conference was chronically mistaken, these objectives will have as a corollary an obligation to orchestrate a concerted Asian appreciation against the dollar and to encourage countries with both deficits and surpluses to make the needed complementary adjustments in their policies regarding domestic demand.

No one doubts that adjustment will eventually happen. The sooner it starts, the less the chance that it will take a catastrophic form. If and when the worst happens, the world will surely not look back forgivingly at the present generation of officials who told themselves reassuring stories about the omniscience of markets while allowing the disequilibria to explode.

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