

Three Discussion Papers from the Symposium on Exchange Rates

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I ENJOYED Jeffrey Frankel's paper. He uses theory nicely to structure the problem, and then with the aid of some reasonable guesstimates he bounds the issues quantitatively. I will make two somewhat technical remarks and three of a more general nature.

The first technical remark concerns the current account deficit. I believe that it is substantially overstated. The United States has run large unrecorded receipts for several years now, \$30 billion in 1984 alone. It is usually assumed that what is going unrecorded is capital inflows, since it is known that the U.S. collection of data on capital flows is imperfect. However, it is noteworthy that there is also a substantial *world* current account deficit: in recent years the summation of total current account positions around the world is not zero but substantially negative, amounting to \$70 billion in 1984. The world deficit is largely due to unrecorded receipts for services, many of which are purchased by governments (and hence are recorded as payments) but received by private parties. The data collection techniques for many services are even worse than those for capital movements, and are a serious weakness in our external accounts. Even bilateral comparisons with Canada reveal that Canadians record several billion dollars a year more in service payments to the United States than the United States shows in receipts from Canada. The shortfall in recorded U.S. receipts for services cannot of course be known with certainty, since we are speculating about unrecorded transactions, but it may well total \$10 billion. This would

not have made a very large dent in our \$100 billion current account deficit in 1984, but it would have eliminated the recorded deficit in 1982 and substantially reduced that in 1983. Net U.S. borrowing from abroad is not as large as it appears to be from the current account.

It is perhaps worth noting that in the future the current account may have substantial unrecorded payments on services. The U.S. technique for estimating payments on liabilities to foreigners is to impute an average rate of return to the recorded liabilities to foreigners. If the general assumption is right that most of the large unrecorded receipts are in fact capital inflows, then the United States will not be recording the service payments on these unrecorded inflows either. But that is a problem largely for the future, and at present I believe that on balance there are large net unrecorded receipts for services.

The second technical remark concerns Frankel's use of real interest rate differentials to measure an investor's incentive to move funds from one country to another, a practice he shares with many analysts these days. But an investor residing in one country and investing in another rarely cares what inflation rates are in the other country. What he really cares about is the nominal yield on his investment abroad, corrected for any change he expects, over the relevant holding period, in the exchange rate between the foreign currency and his home currency. This latter correction is typically unobservable, and we know that it is not well forecast by the forward discount or premium. But it is even less well forecast by inflation differentials. Frankel recognizes the problem and computes real interest rate differentials using three alternative deflators. But the rationale for any of them is weak, and I believe that nominal interest rate differentials between major currencies would be more useful than any of these measures of real interest rate differentials. Even the nominal differentials corrected with the forward discount (not a very good measure) would be better than the real differential for measuring the incentive to hold funds abroad for a specified period. Still better would be to collect direct evidence on exchange rate expectations.

I have three general, or policy-oriented, remarks. First, I do not believe that the large capital inflows into the United States since 1980 can be explained by the "political safe haven" theory. It is true that in 1981 France elected a Socialist government and West Germany experienced some jitters because of political developments in Poland. It is also true that in 1984 Britain had a serious miners' strike. But during the

period 1980–82, with Mrs. Thatcher riding high, Britain had its most probusiness government in many years. It is also difficult to see why funds should have left Japan to seek a political safe haven in the United States during any part of the past four or five years. The argument is doubtful even with respect to West Germany. There was a remarkably stable outflow of long-term German private capital from 1980 to 1983 (1984 data are not yet available). Long-term foreign capital flows into Germany dipped sharply in 1982, but the decline was more than made up for by a net increase in short-term capital inflows. Errors and omissions in the German balance of payments were actually positive during 1981, the year in which jitters might be thought to have been greatest, flanked by modestly negative figures in 1980 and 1982. In short, there is no clear evidence for capital flight from Germany on political grounds. Like Frankel, I am inclined to give much greater weight to economic considerations in explaining the large capital flows into the United States.

In doing his rough calculation on global portfolio management, Frankel focuses, for reasons unexplained, on stocks of government debt. I prefer to approach the problem in terms of allocation of new savings, gross or net of replacement investment. The United States accounts for roughly one-quarter of gross world product, leaving about \$11 trillion produced in the rest of the world in 1984. A net world saving rate conservatively estimated at 10 percent would imply about \$1.1 trillion per year available for new investment, net of replacement. Is it implausible that the rest of the world would want to put 10 percent of its net new savings into the United States, given the U.S. share of gross world product and of world trade?

True, foreign investment in the United States of this magnitude would be historically unprecedented. But there is much greater international interdependence than ever before, and we may be witnessing a vast diversification of investment out of new world savings. Japanese and European insurance companies are diversifying their portfolios. Many developing countries desire to repay some debt during the next several years and to rebuild their reserves. It is at least possible that the rest of the world would be willing to lend to the United States at the rate of \$100 billion for several years. (If the current account deficit somehow grew to \$200 billion, as forecast by many, the willingness of foreigners to lend to the United States on that scale—20 percent of their net saving—for

the foreseeable future would strain my credulity, but is not inconceivable.)

The 1984 investment rate in the United States, while high, was not exceptionally high for a boom year. Therefore one cannot argue that the foreign borrowing that the United States has done is greatly augmenting the U.S. capital stock compared with our past experience. That means that Americans will have to service their growing international obligations out of a capital stock whose growth path has not been altered, and future U.S. incomes will be lower than they otherwise would be. As the debt service burden accumulates, there will have to be some depreciation of the dollar in order to service the debt. Of course, if gross world savings grow at 10 percent, and the share that foreigners wish to put in the United States does not change, this growing burden of debt servicing will not reduce consumption or weaken the dollar so long as U.S. debt service payments do not exceed the (net) growth in new borrowing.

It is worth noting that there is no close relationship these days between net borrowing from the rest of the world by the United States—the U.S. current account deficit—and the pressure that foreign investors put on the dollar exchange rate. There are many financial obligations issued by non-American entities around the world now denominated in dollars, and foreign investment in dollar securities issued outside the United States also puts upward pressure on the dollar exchange rate.

At exchange rates prevailing in early 1985, the U.S. current account deficit is likely to grow from the \$100 billion of 1984, unless economic growth rates accelerate in Europe and Japan. Absent that, maintenance of a U.S. external deficit in the vicinity of \$100 billion is likely to require a sharp drop in dollar exchange rates from their early 1985 levels, but that could happen and still leave them well above levels of 1980.

What policies are open to the U.S. government to relieve the pressures inherent in the current situation? The obvious one is to take steps to reduce the budget deficit, gradually but definitively, thus reducing the draw of that deficit on private U.S. savings and the pull on savings from the rest of the world. Beyond this, the Federal Reserve could carry out open market operations in foreign currency. Frankel calculates that exchange market intervention could have a consequential impact on exchange rates, concluding that economists have dismissed too readily the quantitative impact of such intervention. But he himself shrinks from

advocating such intervention on grounds that it might or would revive inflationary expectations.

I have a different view. I believe that with a carefully articulated program the Federal Reserve could influence the exchange rate without reviving inflationary expectations. It would explain that the dollar is too strong; that the strong dollar is hurting American industry, perhaps irreparably; that its strength is intensifying protectionist pressures, possibly leading irresistibly to protectionist actions by Congress; and so on. The Fed would therefore take steps to encourage a drop in the value of the dollar, recognizing that such a drop would affect the prices of tradable goods, especially primary commodities. It would assert that it is not thereby monetizing the government budget deficit. Indeed, it could actually reduce its normal intake of Treasury securities to underline this point. Its actions would thus be a combination of sterilized and unsterilized exchange market intervention: the first would alter the mix of foreign and U.S. bonds available to the public, and the second would result in some increase in high-powered money. Both effects would weaken the dollar; if skillfully executed, I believe they would do so without reviving inflationary expectations.

This change in policy would have the additional advantage of pricking the dollar appreciation bubble, if, as I believe, there is some element of a bubble in early 1985 (but not, as on Frankel's calculations, going back to 1981). Data Resources, Inc., has fitted an equation based on relative inflation rates, interest rate differentials, and current account imbalances that explains the real value of the dollar very well through 1983, but does very badly in 1984. In some sense virtually everyone involved believes that the dollar is unsustainably strong. Yet market participants are betting, despite this widespread belief, that they can get out ahead of the crowd. Pricking the bubble would result in a sharp drop in the dollar, but that would be salutary starting from the levels of early 1985, and gradualism could then proceed from there.

There is of course one serious difficulty with this proposal: the Federal Reserve is not in charge of foreign exchange rate policy. The new Treasury team should take a hard look at it.

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Peter Isard and Lois Stekler do an excellent job of showing that recorded capital account transactions cannot give an unambiguous explanation of the role of capital flows in pushing up the dollar. The statistics cannot tell us who the actors are, or what their vehicles, much less their motives, might be.

Isard and Stekler make two very specific points. The first is that there is no question that the United States runs a current account deficit and, to that extent, is drawing down net foreign assets. But whether that reduction in net foreign assets occurs in the banking sector or outside, whether in U.S. banks or foreign banks, whether for reasons of interest differentials, enhanced profitability of capital, or safe haven, cannot be inferred with any accuracy from the data. Isard and Stekler rightly point out that there are only two reasons for trade in financial assets: liquidity trading and differences in belief. Only liquidity trading can plausibly account for net capital inflows, since it is hard to believe that U.S. residents and foreigners systematically disagree in their assessments of risk and return.

The second point Isard and Stekler make very strongly is that capital flows are not in any obvious way related to the value of the dollar. It is easy to identify shifts in the capital account that never come close to the foreign exchange market. Here is an example. The credit rationing of less developed countries (LDCs) in the period 1983–84 has meant that these countries had to earn an increased part of their debt service by means of trade surpluses, rather than continuing, as they had previously, to borrow to pay the interest. In terms of U.S. balance of payments, we see a worsening of our trade balance and a capital inflow corresponding to the reduced rate of bank lending to debtor LDCs. The reduced rate of bank lending abroad might be said to enhance the dollar, but that effect is precisely offset by increased trade deficits owing to the need of LDCs to earn the interest payments. The two effects neutralize each other in

their effect on the exchange rate but explain a major part of the shift in the capital account.

The lack of a close link between the balance of payments and the dollar is particularly clear in the case of safe haven arguments. Do safe haven investors shift from one jurisdiction to another or from one currency denomination to another? Shifting dollar deposits from Zurich to New York surely does nothing to the dollar even though it will show as a capital inflow. But are there any effects if a sheik withdraws CDs from the Eurodollar market to place them in the New York stock market, while as a result a Frankfurt bank whose funding is reduced sells off some of its holdings of U.S. T-bills? Without a model of the exchange rate, we cannot even start answering that question. Indeed, when we say an increased demand for “dollars” strengthens the dollar, do we mean M1, dollar denominated bonds, U.S. government dollar denominated bonds, securities issued by U.S. residents, or any asset located in the United States?

Nobody really means literally that portfolio shifts are centered on shifts from one country’s M1 to another. Even ardent “currency substitution” advocates have now relinquished that belief. But that means we have to look for exchange rate determination throughout the asset market, not only in the money market. The monetary approach to exchange rates seemed to promise a close link between exchange rates and monetary variables. It was built around the idea of a tight purchasing power parity (PPP) relation and a stable demand for money, a combination that assured that money suppliers were the only significant influences on exchange rates. Not much is left of that approach now that both PPP and the stable real money demand have vanished. Nor is there an equally simple framework to replace the monetary approach.

The fashionable theory today is the Mundell-Fleming model, with its emphasis on sluggish wage-price behavior, combined with a portfolio balance model that emphasizes risk premiums as determined by relative asset supplies. But even that much richer model is not enough. Two points in particular deserve attention. First, as Jeffrey Frankel’s symposium paper makes very clear, the risk premium is quantitatively negligible, at least in the context of a mean-variance framework. The problem is the following: suppose real money demand in each country depends only on the country’s bond yield and real income and is

independent of both wealth and foreign asset returns. Then interest rates are set by real money supplies and real income levels in *LM* curve fashion. Given the interest differential (nominal and real), relative bond supplies determine the rate of depreciation and the level of the exchange rate. The model predicts, given Frankel's finding, that an ever so slight change in anticipated depreciation will balance portfolios even in the face of very large changes in relative supplies. A move of a percent or two on the level of the exchange rate and a move of a few basis points on the rate of change of the exchange rate combine to clear asset markets even in the face of a \$100 billion shift in supplies. One is puzzled then about how to explain the large fluctuations in exchange rates. The exchange market joins other asset markets where excess volatility has already been identified as a difficult issue.

Second, a specific shortcoming of the exchange rate models now in vogue is the omission of real assets from portfolio considerations. A good day on the stock market is worth more in terms of relative asset supplies than a few weeks of federal budget deficits. Seen in this way, exchange rates are determined jointly with long-term bond prices and stock prices, and there is simply no sense in trying to separate exchange rate determination from the setting of all other asset prices.

In discussing the cost to the United States of the high dollar, Isard and Stekler point to the increased cost of external debt accumulation involved in present and prospective current account deficits. It is true that highly persistent, large deficits do raise the long-run cost of debt service significantly and hence reduce long-run real income. But is that an alarming prospect for the United States? It can readily be shown (using the intertemporal budget constraint) that a present deficit in the external balance of 1 percent of GNP, being reduced over time by 20 percent per year, involves a long-run cost in terms of debt service equal to 1.3 basis points, or a percent of a percent of GNP. The calculation makes the point that, to be significant at all, deficits must be large and persistent. The danger occurs when a debtor country experiences a rise in real interest rates and a collapse in growth rates of output. A transitory deficit is not a serious problem from the point of view of sustainability or long-run real income.

A much more serious issue is the crowding out of existing capital and jobs by exchange rate overvaluation as firms in trade-exposed sectors close down or shift operations abroad. Since 1979 U.S. manufacturing

employment has declined by nearly 7 percent, and continued strength of the dollar will only accentuate the difficulty that some industries are experiencing as a result of the overvaluation. It is one issue if our borrowing today has no counterpart in capital formation to help pay the interest rate. It is quite another if it actually leads, via bankruptcy or relocation, to a reduction in domestic potential output.

The discussion of long-run prospects for the U.S. external balance invariably focuses on a real depreciation of the dollar as a way to wipe out the trade deficits. But that seems to exaggerate the ability of the rest of the world to bear deficits. Do LDCs get to borrow again to run deficits, and, if so, from whom? Or does Europe find that it can easily live with a lower dollar even in the face of the dramatic real wage and employment problems that Europeans bemoan even now in their position of undervaluation? The adjustment of the U.S. current account deficits can come as much from a change in relative activity levels in the United States and abroad as from a real depreciation of the dollar.

The sensible strategy at this stage, of course, would be a fiscal tightening in the United States, accompanied by an easing of real interest rates. Those countries in Europe that have already gone beyond fiscal consolidation (West Germany and the United Kingdom especially) would lead a European expansion by means of tax reductions and a real interest rate reduction matching that in the United States. The worldwide decline in real interest rates and the continuation of growth would benefit LDC debtors and budget deficits worldwide. Growth in the rest of the world would rise relative to U.S. growth, thus providing a correction in the U.S. trade deficit.

Suppose these sensible adjustment policies are not adopted and the dollar remains strong or grows even stronger. Would it be important to take some immediate policy steps? An import surcharge, an idea that has been discussed in this context, would disrupt the world economy and harm U.S. exports. One alternative, a reconsideration of intervention, is particularly appealing if one thinks that the high dollar represents a bubble. Intervention to burst the bubble might follow a strategy of causing "disorderly markets," trying to achieve large declines in the dollar per unit of time so as to weed out all but the most obstinate bubblers. But if the high dollar reflects more basic portfolio preferences, a forceful alternative would be an interest equalization tax or simply a big tax on the earnings of foreign-held U.S. assets. The argument is

particularly relevant if safe haven motives account for the capital inflows. If the United States is considered so excessively safe that it suffers trade problems as a result, then it makes sense to charge rent for this place in the sun. Certainly such a policy would have a favorable fiscal effect. It would also quite likely precipitate a fall in the dollar. An interest equalization tax is not a complete solution, because the depreciation and the resulting trade improvement would push up inflation and interest rates, thus shifting the disequilibrium to other sectors of the economy. But it could help force the fiscal correction that is ultimately the only way to unravel the knot.

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Almost everyone agrees that the dollar is too high for the health of the American and world economies. Almost everyone is frightened by the prospect that it will fall. Why?

It is one thing to manage a fall in the dollar by a change in the U.S. policy mix, actual or scheduled. It is quite another thing if the dollar falls of its own weight without any U.S. policy correction. The source of such a fall would be a shift in world portfolio preferences away from dollar assets, for any of a number of reasons: downward revision in estimates of the future equilibrium value of the dollar; portfolio saturation with dollar assets at long last; changes in the international distribution of wealth because of the structure of current account surpluses and deficits; reassessments of the risks of different currencies; expansions abroad that absorb domestically the high saving capacities of foreign economies.

The U.S. policy mix must be corrected eventually whatever happens to the dollar. Early action is clearly the better way to bring down the exchange value of the dollar. Stephen Marris does not expect that. He anticipates an autonomous flight from the dollar, lowering its value by as much as 40 percent by 1989. As a result, he expects an economic disaster, a stagflationary recession reminiscent of the 1970s, beyond the capacity of American policymakers to prevent or remedy. He spells out

an internationally cooperative strategy with somewhat better prospects of success, but he seems to have little hope that it will be adopted in time.

I do not know how to estimate the probability of a flight from the dollar as soon, as sudden, and as sharp as Marris expects. He is talking about the puncturing of a bubble, intrinsically an event that defies rational economic analysis. Unlike Jeffrey Sachs and Jeffrey Frankel, in their papers in this volume, Marris sees no solid basis for the present value of the dollar and does not think that it already embodies some expectations of depreciation.

In any case, I think Marris exaggerates the short-run consequences for the U.S. economy, given intelligent policy by the Federal Reserve. I suppose that the Fed is managing, I might even say fine-tuning, the U.S. economy along a target path of real GNP. Right now the path is a "soft landing" approach to the inflation-safe unemployment rate (the natural rate), to be followed by sustainable growth at constant unemployment. I believe Fed policy could be thus interpreted since October 1982. The Fed has braked the economy when its real quarter-to-quarter growth has seemed overly exuberant, and has stimulated it when the recovery has threatened to stall. Macroeconomic performance appears to take precedence over targets for intermediate monetary aggregates. The Fed's most recent *Monetary Report* to the Congress emphasized the likelihood of velocity swings that the Fed would need to offset.

Naturally the Fed becomes more cautious the closer we get to the runway, and wants the excess of real growth over sustainable potential growth to diminish as the natural unemployment rate is approached. The Fed does not know what that rate is these days, and probably adds a safety margin to Robert Gordon's estimate of 6 percent. Neither do they, or we, know precisely what the growth rate of potential GNP is in the 1980s. We will all learn more as and if this recovery is completed. The evidence so far is that there is still some distance to go. At $7\frac{1}{4}$ percent unemployment, which the economy has been experiencing for almost a year now, there are no bottlenecks or shortages of capacity to be worried about, and prices and wages are very well behaved.

Given this policy, an autonomous shift of portfolio preferences away from dollar assets would entail an eventual increase in interest rates to stay on the desired real GNP track. At first, according to the J-curve scenario, the depreciation of the dollar would not improve net exports,

there would be no additional aggregate demand, and consequently there would be no need for higher real interest rates. Indeed, the situation might be quite the reverse. Eventually, though, net exports would turn around, stimulating the U.S. domestic economy and necessitating an increase in interest rates to shut off enough domestic demand to make room for the (algebraically) higher net exports. The J-curve should give the Fed enough time to complete the recovery, even if the “run” from the dollar were to occur this year.

Completion of the recovery is very important in the present context, because it will provide additional domestic saving to replace the net foreign saving that we are assuming, following Marris, will be withdrawn. If the economy is about $1\frac{1}{4}$ unemployment points above the natural rate, that is equivalent to about \$120 billion of GNP. Of that, some \$50 to \$60 billion would be additional national saving, including a \$30 billion reduction in the federal deficit. This is about half of the present current account deficit.

I emphasize that tightening of Fed policy should be designed to maintain macroeconomic balance of demand and supply, not to “defend the dollar.” A recession would be a perverse response to the shock under discussion. It would diminish, not increase, the economy’s saving. In particular, cyclical additions to public debt would permanently increase its interest burden, a major factor in the projected growth of deficits and debt in the future.

How large would the eventual rise in interest rates have to be? Assuming a shift out of dollars sufficient to wipe out the present \$100 billion trade deficit, Marris estimates 350-500 basis points. I guess it would be only half that if completion of recovery provided another \$50 billion of domestic saving. (Note, incidentally, that any increase of U.S. interest rates will presumably hold some funds in dollars; that is, a portfolio shift large enough to balance the U.S. current account would exceed the present deficit.)

Worries about dollar depreciation, however it comes about, focus on price effects. Their magnitude has been debated at length in this room. I conclude that the fraction of a depreciation that would show up in U.S. price indexes is quite low. But the amount of depreciation in Marris’s hard landing scenario is quite large. Ten percent of 40 percent is 4 percent, and that addition to domestic price increases within one or two years would make for higher inflation rates than we have become

accustomed to. There would be lots of somber hand wringing in the press and especially in financial circles.

I want to stress two points. The first is that some day we have to give back the price declines that dollar appreciation has contributed to our disinflation performance since 1980. Even Sachs, who defends the policy mix that brought the appreciation, admits that. We borrowed some disinflation from the rest of the world, and we have to repay, whether our depreciation will be managed or unmanaged, orderly or disorderly, gradual or abrupt.

The second point is that the main danger of the give-back is not the one-shot elevation of our price level but the possible secondary spiral effects on the inflation rate through wage catch-ups, markups, further wage increases, and so on. On the whole, now seems a good time to face this risk—in a slack economy with weak unions and quiescent wage settlements, with employers hungry for volume and still frightened of foreign competition. Moreover, in these times many importers and foreign suppliers will absorb in their own profit margins much of the dollar's depreciation.

I very much agree with Marris that the present mix of monetary and fiscal policy in the United States is not viable. I too have an apocalyptic story to tell, but I do not think that apocalypse is imminent. The budget deficit need not prevent the completion of the current recovery or place that objective beyond the reach of the Fed. But the runaway growth of public debt must be arrested. We are on an explosive track.

Let me remind you of the basic dynamic equation of deficit and debt:

$$\dot{d} = x + (r - g)d.$$

Here d is the ratio of debt to GNP, and \dot{d} is its change with time. The term x is the *primary* deficit, which excludes transactions related to the service of the debt, again relative to GNP. The net interest cost of the existing debt is r , and g is the growth rate of GNP. The equation applies either to federal debt or to the nation's net debt to the rest of the world. In the case of the government, x refers to the noninterest part of the budget; in the case of foreign debt, x refers to the trade account.

It is obvious from the equation that if both x and d are positive and if r exceeds g , then d must be positive and must remain so as long as those conditions remain true, maybe longer. This is the case today for federal deficit and debt, with x about 0.025 structurally, $(r - g)$ at least 0.01, and

d about 0.40. Add to these facts the assumption, which I regard as realistic, that the stock of private wealth to GNP is not indefinitely expandable. There is some finite limit to it, so that the bigger the government debt is, the lower the capital stock will be for the same amount of net external debt. Then the growth of debt not only crowds out capital but picks up speed from the crowding-out process itself. As the capital-output ratio declines and the interest rate rises, the total deficit and debt rise faster and faster.

This unstable track is a lot scarier than the economists' usual tale of crowding out. The usual scenario traces out the transition from one steady state to another consequent to a permanent change in the rate of national saving. Simulations of this kind do not show very dramatic effects on future standards of consumption or other variables, and that is why economists' warnings about crowding out carry little conviction. But these exercises assume the existence of stable tracks, so that the comparative statics of steady-state equilibrium legitimately apply. That is definitely not the case in the situation now facing the United States.

The apocalypse of the unstable track is the complete elimination of gross investment, all gross saving being required to absorb the budget deficit. Even then, the debt and deficit are still growing, beyond the wealth and saving capacities of the public. What gives? A logical possibility is q , the valuation of the capital stock. You could imagine a stock market decline that lowers the value of the stock faster than its physical amount is depreciating. It makes sense for q to be below par when no gross investment activity is occurring.

My apocalyptic story assumes away an inflationary escape via monetization of debt; the Fed is assumed to monetize only enough to maintain the inflation rate at 4 to 5 percent, a fraction of GNP decreasing as interest rates rise. I also assume that consumer-savers have no expectations of tax increases or other budgetary corrections; otherwise some will say, following Barro, that government debt is not net wealth and does not crowd out. My purpose is to argue that something must be done to create expectations of that kind. In a policy-oriented discussion, it makes no sense to say that nothing need be done because something will be done.

Some observers seem to think that net borrowing from the rest of the world can relieve us of the costs and ultimate hazards of crowding out. This would be possible if we could tap foreign capital indefinitely at a

net interest cost below our own sustainable growth rate. Obviously, if the foreign borrowing rate is even temporarily below the marginal productivity of capital investment in the United States, we should take advantage of it. But then the capital stock would adjust to equalize the two rates. After that, we would be paying the full rate of return on capital to foreigners.

The question would be: what is the schedule of supply of foreign savings to this country? It seems likely that, as the federal debt grows relative to the economy, we will be able to import foreign capital at the same or increasing amounts relative to GNP only at ever higher real interest rates. If so, the same explosive dynamics that above described the crowding out of domestic capital stock applies to the crowding out of our external wealth, as it becomes increasingly negative. The exchange rate would have to appreciate continuously to induce a primary current account deficit corresponding to the needed borrowing.

This is the setting for Marris's apocalypse, his "hard landing." The confidence of foreign lenders, and of Americans too, runs out. Capital is withdrawn and the exchange rate plummets. Surely this would happen when net foreign debt came to exceed the capital stock. Marris thinks it will happen long before that. Whenever it occurs, we then have to service or repay a debt at adverse terms of trade. In terms of the future consumption opportunities of Americans, this burden plays the same role as the cessation of gross investment in the purely domestic crowding-out scenario.

In conclusion, I want to make it clear that I am not predicting catastrophes. My prediction is that something will be done to avert them. The point of describing them is to make the case for doing something. That something, in my opinion, is a big change in the fiscal-monetary mix, designed to get the federal government's net interest rate down below the sustainable growth rate. Sachs justifies the extreme and bizarre Reagan-Volcker mix by the timely assist the appreciation of the dollar gave to disinflation. He recognizes that his justification assumes that the policy mix will be reversed in the future. The sooner, the better.