Commentary on "Is There a Case for More Managed Exchange Rates?"

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I am very sympathetic to Jeffrey Sachs' general analysis of instability under the world dollar standard since exchange rates began to float in the early 1970s. His description of worldwide inflation in the 1970s being associated with dollar depreciation and excess money growth abroad—and deflation in the 1980s from dollar appreciation and monetary contraction in other industrial countries—is dear to my heart. (Although as we shall see, this world view is not incorporated in Sachs' specific econometric work in previous papers.)

That said, I must confess to being overwhelmed by the ambitious simulation model in the second half of Sachs' paper—which seems to bear little or no relationship to the nice historical analysis of the international business cycle in the first part. The historical analysis makes empirical judgments about what is important and focuses on key monetary relationships in the world as we know it. Whereas the simulation model is eclectic, complicated, and one in which "disturbances" can come from any direction with no attempt to assess their likelihood or empirical relevance.

Sachs has four possible rules describing monetary policy where governments may target exchange rates, money growth, and nominal GDP either jointly or separately. He then throws in both "real" and financial disturbances and calculates the hypothetical reaction of the economy under each of his rules. I can't easily interpret how economically meaningful the results are.

To impose a rule that the central bank stabilize growth in nominal GDP is not meaningful because the underlying technical problem of how to do it is not yet resolved. There are long lags between financial actions taken today and their effect on goods markets and GDP a year or two hence. Stabilizing growth in nominal GDP could be a (long run) goal of monetary policy—leaving open the question of which short-term rules are appropriate for getting there.

In contrast, operating rules based on stabilizing the nominal exchange

rate or growth in the nominal money supply are economically meaningful. Information on the exchange rate is immediately available, and money supply statistics are known within a month or two. The central bank can intervene in financial markets — for domestic bonds or foreign exchange — to adjust the monetary base and influence the exchange rate or money stock relatively quickly and predictably.

However, what the central bank's goals are, and which operating procedures it should follow to achieve them, should be more sharply focused. As Milton Friedman has taught us (1968), the monetary authority can't have sustained influence over real variables such as GDP growth, the trade balance, or unemployment.

Instead, suppose that the *only* goal of monetary policy is to stabilize the purchasing power of the national money over the long run, while avoiding short-run cycles of inflation or deflation. How much weight, if any, should the Federal Reserve give to the nominal dollar exchange rate — measured against the currencies of other industrial countries — as a leading indicator of future price inflation within the United States?

Limitations of previous econometric work

The basic econometric model of the Federal Reserve Board (Hooper and Lowery, 1979) measures only the direct effects of changes in the dollar exchange rate on the U.S. prices of imports and American-made import-competing goods. Jeffrey Sachs in an earlier paper (1985) and Robert Solomon in his contribution to this conference used this model as the starting point for calculating the impact of the appreciating dollar on the U.S. Consumer Price Index from 1981 to 1984. Table 5 of Solomon's paper shows the impact to be relatively modest: by 1984, inflation had only slowed 1.2 percentage points from the huge dollar appreciation that began in early 1981.

In a modified version, Sachs (1985) adds backward-looking wage adjustment which, somewhat implausibly for our era of rational forward-looking expectations, quickly incorporates any slowdown in domestic price inflation into dollar wage claims. The proportion of U.S. disinflation "explained" by the exchange rate then rises considerably. Skeptical of Sachs' work, Solomon sums up rather cautiously by giving a huge confidence interval: "The rise of the dollar probably accounted for more than one-sixth and less than *one half* of the diminution of inflation from 1980 to 1984". Not much help there for the Federal Reserve's struggling money managers!

However, I submit that the dollar exchange rate-both as an instrument that acts on U.S. prices, and as an indicator of shifts in inflationary expectations — influences the U.S. price level much more strongly than either the Hooper-Lowery model, or the Sachs and Solomon modifications of it, would suggest.

In common with most writers on the subject, these authors ignore the key role of the dollar exchange rate in generating the U.S. and international business cycle. For purposes of calculating the determinants of U.S. price inflation, they treat both the rate of price inflation in the rest of the world, and the level of unemployment in the United States, as if they were independent of what was going on in the foreign exchanges.

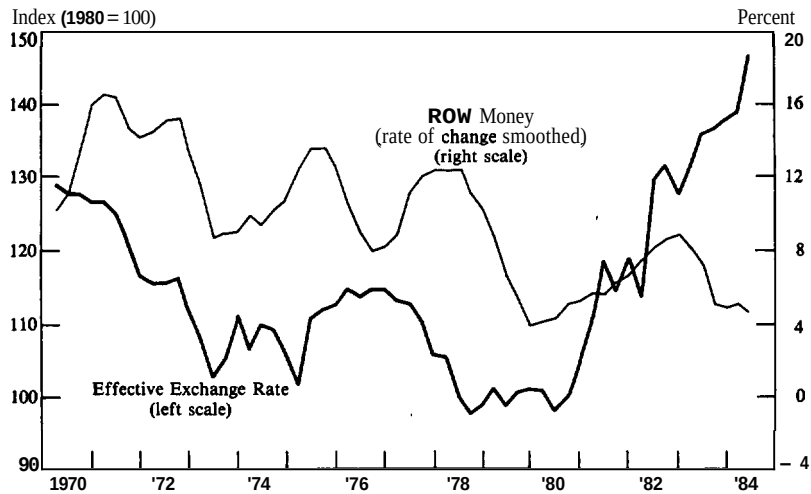
Hooper-Lowery simply assume price inflation in other industrial countries is given as does Sachs, who goes further and takes the level of unemployment to be exogenous in determining U.S. wage inflation. By so divorcing the impact of the business cycle from their exchange rate calculations, they greatly understate the importance of the dollar's international value on domestic U.S. prices.

The asymmetrical position of the United States in the world business cycle

Since the Bretton Woods system of fixed exchange rates began to break down in the early 1970s, waves of speculative pressure against or in favor of

FIGURE 1

U.S. Effective Exchange Rate and the Rest of the World Money



Effective Exchange Rate = IMF definition: MERM (trade) weighted nominal rate against 17 countries.

ROW Money = Percent growth in nominal money in ten industrialized countries other than the U.S. (See Table 2.)

the dollar have reflected shifting expectations of inflation or deflation to come in the United States. If the Federal Reserve remains passive, these are then propagated out into the other industrial countries through the reactions of foreign central banks under the (asymmetrical) operation of the world dollar standard—as Sachs described in the first part of his paper.

When the dollar tended to be very weak as in 1971-73 and again in 1977-78 against all other currencies (Figure 1), this was followed by worldwide inflation a year or two later in 1973-74 and again in 1979-80. Similarly, when the dollar became unexpectedly strong in 1981, disinflation in the United States and in the rest of the industrial world proceeded much more rapidly than anyone had expected.

Elsewhere, I have tried to spell out a complete model of this complex process (McKinnon, 1982 and 1984). In this short comment, let me simply list a few stylized facts and some regression results that seem to fit this hypothesis.

Table 1 shows that one-year to three-year cycles of inflation or deflation have been experienced in common throughout the industrial world as measured by their Wholesale Price Indices (WPI), which approximate movements in the prices of internationally tradeable goods. True, Italy is on a higher trend rate of price inflation than Japan, but cyclical fluctuations in their prices are positively correlated. The right-hand columns show the positive correlation between price inflation in the United States and the rest of the world (ROW)—the ten other principal industrial countries.

Under floating exchange rates countries are not necessarily tied to experiencing inflation in common. Can we then identify some common monetary mechanism which links them together? Table 2 shows that, on average since 1970, money growth in ROW has been much less stable than money growth in the United States—although price inflation in the United States has been just as variable or even more so. Moreover, the right-hand column of Table 2 shows that fluctuations in money growth in other industrial countries *are* highly positively correlated.

Figure 2 then shows why. One can see the strong negative correlation between quarterly rates of change in the dollar exchange rate and money growth in ROW. In the lower panel where a five-quarter moving average of both variables is used, the negative correlation is -0.620. In order to smooth their individual dollar exchange rates (although not very successfully), other central banks tend to reduce their money growth collectively when the dollar is rising—reduce it when the dollar is falling.

Because the Federal Reserve has not typically responded to these fluctuations in the dollar exchange rate in an offsetting fashion, the total stock of "world" money has fluctuated cyclically. This fundamental asymmetry in the world dollar standard—where the Federal Reserve fails to respond systematically to the exchange rate while other central banks do respond—is a

TABLE 1
Price inflation in tradeable goods, 11 industrial countries
(percentage change in annual averages of WPIs)

	Belgium	Canada	France	Germany	Italy	Japan	Nether-Lands	Sweden	Switzer-land	United Kingdom	United States	World average	Rest of world[a]
(Weights: GNP 1964)	(.0132)	(.0394)	(.0778)	(.0892)	(.0494)	(.0681)	(.0144)	(.0167)	(.0113)	(.0796)	(.5408)		
1958	-4.4	0.4	5.1	-0.5	-1.7	-6.5	-1.3	4.3	-3.2	0.8	1.5	0.68	-0.30
1959	-0.3	0.8	7.2	-0.8	-2.9	0.9	0.2	0.9	-1.6	0.3	0.2	0.57	1.00
1960	1.2	0.2	3.5	1.3	0.8	1.1	0.0	4.1	0.6	1.3	0.2	0.81	1.54
1961	-0.2	0.2	3.0	1.5	0.0	1.1	-0.2	2.2	0.2	2.6	-0.4	0.47	1.50
1962	0.8	1.1	0.6	0.9	3.2	-1.6	0.3	4.7	3.3	2.3	0.2	0.64	1.16
1963	2.5	1.3	2.9	0.5	5.3	1.6	2.4	2.9	3.9	1.0	-0.4	0.72	2.03
1964	4.7	0.9	3.5	1.0	3.0	0.4	6.1	3.4	1.3	3.1	0.2	1.15	2.27
1965	1.1	1.3	0.7	2.5	1.8	0.7	3.0	5.2	0.6	3.5	2.0	1.98	1.95
1966	2.1	2.9	2.8	1.7	1.5	2.4	5.0	6.4	1.9	2.9	3.4	3.02	2.57
1967	-0.9	1.9	-0.9	-1.0	-0.2	1.7	1.0	4.3	0.3	3.1	0.2	0.45	0.75
1968	0.2	2.2	-1.7	-0.7	0.6	1.0	1.9	2.0	0.1	4.1	2.4	1.68	0.83
1969	5.0	3.7	10.7	1.9	3.6	2.0	-2.5	3.5	2.8	3.7	3.9	3.99	4.09
1970	4.7	2.4	7.5	5.0	7.4	3.7	4.6	6.8	4.2	7.1	3.6	4.54	5.65
(Weights: GNP 1977)	(.0172)	(.0487)	(.0885)	(.1122)	(.0471)	(.1404)	(.0228)	(.0195)	(.0148)	(.0572)	(.4316)		
1971	-0.5	2.0	2.1	4.3	3.3	-0.8	4.5	3.2	2.1	9.1	3.3	2.94	2.67
1972	4.0	4.3	4.7	2.5	4.1	0.8	5.1	4.6	3.6	5.3	4.4	3.74	3.24
1973	12.4	11.2	14.7	6.6	17.2	15.8	6.9	10.3	10 7	7.4	13.1	12.42	11.91
1974	16.8	19.1	29.1	13.5	40.8	31.4	9.6	25.3	163.2	22.6	18.8	22.00	24.436
1975	1.2	11.2	-5.7	4.6	8.5	3.0	6.7	6.4	-2.3	22.2	9.3	6.93	5.12
1976	7.1	5.1	7.4	3.7	23.8	85.0	7.8	9.0	-0.7	17.3	4.6	6.58	8.09
1977	2.4	7.9	5.6	2.7	16.6	1.9	5.8	9.2	0.3	19.8	6.1	6.35	6.55
1978	-1.9	9.3	4.3	1.2	8.4	-2.5	1.3	7.6	-3.4	9.1	7.8	4.99	2.86
1979	6.3	14.4	13.3	4.8	15.5	7.3	2.7	12.5	3.8	12.2	12.5	10.73	9.39
1980	5.8	13.5	8.8	7.5	20.1	17.8	8.2	16.9	5.1	16.3	14.0	13.33	12.82
1981	8.2	10.1	11.0	7.7	16.6	1.7	9.2	11.6	5.8	10.6	9.0	8.50	8.13
1982	7.7	6.0	11.1	5.8	13.9	1.8	6.6	12.6	2.6	8.6	2.1	4.80	6.85
1983	5.2	3.5	11.0	1.5	10.5	-2.2	1.8	11.2	0.5	5.5	1.3[b]	2.73	3.82
1984	7.4	4.1	13.3	2.9	10.4	-0.2	4.2	7.9	3.3	6.2	2.4	3.98	5.18

- Not available.

Source: IMF, International Financial Statistics, 1984 Yearbook and July 1985, line 63, wholesale price indices including finished goods and primary products.

[a] United States excluded.

[b] Preliminary.

FIGURE 2

U.S. Effective Exchange Rate and the Rest of the World Money

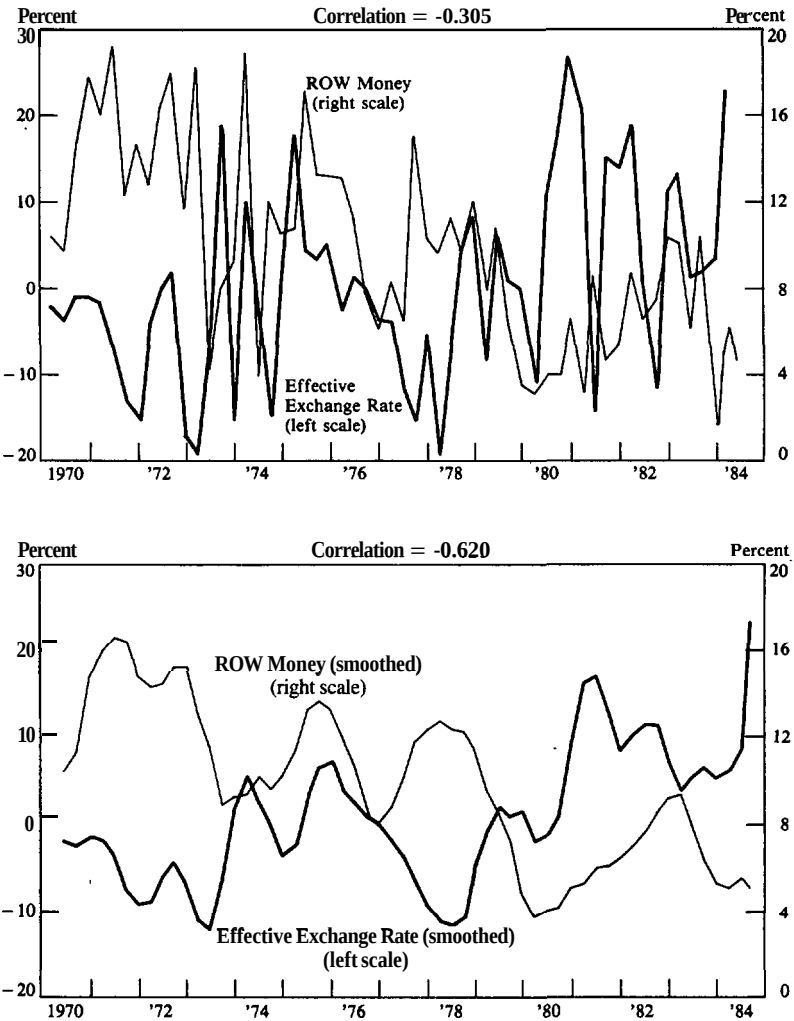


TABLE 2
Money growth in domestic currencies, 11 industrial countries
(percentage change in annual averages of M1)

	Belgium	Canada	France	Germany	Italy	Japan	Nether-lands	Sweden	Switzer-land	United Kingdom	United States	World average	Rest of world[a]
(Weights: GNP 1964)	(.0132)	(.0394)	(.0778)	(.0892)	(.0494)	(.0681)	(.0144)	(.0167)	(.0113)	(.0796)	(.5408)		
1956	2.9	-1.2	10.3	7.2	8.5	16.4	-3.7	7.4	6.0	1.0	1.1	3.78	6.94
1957	-0.1	4.0	8.6	12.0	6.3	4.1	-2.0	3.4	1.8	2.7	-0.6	2.43	6.01
1958	5.8	12.8	6.4	13.1	9.9	12.8	11.9	1.6	9.2	3.0	4.3	6.47	9.04
1959	3.2	-3.2	11.4	11.8	14.0	16.5	4.5	18.0	6.1	4.6	0.1	4.53	9.74
1960	1.9	5.1	13.0	6.8	13.5	19.1	6.7	-1.2	10.2	-0.8	-0.4	3.72	8.58
1961	7.7	12.4	15.5	14.8	15.7	19.0	7.7	10.7	8.1	3.2	2.9	7.39	12.68
1962	7.2	3.3	18.1	6.6	18.6	17.1	7.5	5.6	16.6	4.4	2.1	6.18	10.99
1963	9.8	5.9	16.7	7.4	16.9	26.3	9.8	8.1	8.9	0.3	2.8	6.86	11.65
1964	5.6	5.1	10.3	8.3	6.7	16.8	8.5	7.7	0.2	5.0	4.1	6.16	8.59
1965	7.4	6.3	9.0	8.9	13.4	16.8	10.9	6.4	12.8	2.7	4.3	6.59	9.30
1966	6.7	7.0	8.9	4.5	15.1	16.3	7.2	9.9	3.1	2.6	4.6	6.31	8.33
1967	4.7	9.5	6.2	3.3	13.6	13.4	7.0	9.8	6.0	3.2	3.9	5.49	7.37
1968	6.8	4.4	5.5	7.6	13.4	14.6	8.8	-1.8	141.5	6.0	7.0	7.51	8.12
1969	2.3	6.9	6.1	8.2	15.0	18.4	9.4	2.0	9.5	0.4	5.9	7.00	8.30
1970	-2.5	2.4	-1.3	6.4	21.7	18.3	10.6	7.3	9.8	6.4	3.8	5.80	8.15
(Weights: GNP 1977)	(.0172)	(.0487)	(.0885)	(.1122)	(.0471)	(.1404)	(.0228)	(.0195)	(.0148)	(.0572)	(.4316)		
1971	10.3	12.7	13.7	12.0	22.9	25.5	16.7	9.0	18.2	11.8	6.8	12.45	16.74
1972	15.0	14.3	13.0	13.6	18.0	22.0	17.7	11.8	13.4	13.1	7.1	12.21	16.10
1973	9.8	14.5	9.9	5.8	21.1	26.2	7.4	9.6	-1.0	8.6	7.3	11.06	13.91
1974	6.8	9.3	12.6	6.0	16.6	13.1	3.1	16.3	-1.7	4.8	5.0	7.78	9.88
1975	12.4	13.8	9.9	13.8	8.3	10.3	18.7	15.2	2.4	15.6	4.7	8.83	11.96
1976	9.6	8.0	15.0	10.4	20.5	14.2	11.8	14.0	7.3	13.8	5.7	9.91	13.10
1977	8.0	8.4	7.5	8.36	19.8	7.0	14.3	8.3	4.7	14.4	7.6	8.72	9.57
1978	6.7	10.0	11.2	13.4	23.7	10.8	5.3	13.6	12.7	20.1	8.2	10.99	13.11
1979	3.5	6.9	12.2	7.4	23.9	9.9	2.7	12.7	7.8	11.5	7.7	9.23	10.39
1980	-0.2	6.3	8.0	2.4	15.9	0.8	4.2	21.1	-5.4	4.9	6.2	5.53	5.01
1981	3.6	4.3	12.3	1.2	11.1	3.7	2.6	12.0	-0.9	10.0	7.2	6.50	5.96
1982	3.4	2.0	14.9	3.5	9.9	7.1	4.9	9.8	3.1	8.3	6.5	6.96	7.31
1983	5.0	10.2	12.1	10.3	17.3	3.0	10.6	11.4	7.6	13.4	11.1	10.1	9.48
1984	3.3	2.3	8.2[b]	3.3	8.4[b]	2.9	4.1	2.4[b]	2.5[b]	14.9[b]	6.9	6.08	5.45

-Not available

Source: Federal Reserve Bank of St. Louis, "International Economic Conditions," June and August 1985
[a] United States excluded.
[b] Preliminary.

TABLE 3

American prices, the dollar exchange rate, and U.S. money growth: historical comparisons

(Quarterly data, t-statistics in parentheses)

Dependent Variable	$\dot{M}^{US}$	$\dot{E}^{US}$	$\bar{R}^2$	SER (Percentage Points)	DW	Time Period
$\dot{DEF}^{US}$	0.98 (8.24)		0.61	0.26	2.03	62.2-73.1
$\dot{WPI}^{US}$	1.62 (5.58)		0.47	0.64	2.07	62.2-73.1
$\dot{DEF}^{US}$	0.44 (1.12)		0.11	0.58	0.78	73.2-84.4
$\dot{WPI}^{US}$	0.81 (0.70)		-0.04	1.73	0.98	73.2-84.4
$\dot{DEF}^{US}$	0.57 (1.91)	-0.34 (-4.87)	0.55	0.41	1.33	73.2-84.4
$\dot{WPI}^{US}$	1.20 (1.35)	-1.07 (-5.17)	0.49	1.12	2.21	73.2-84.4

Note: Variables defined in the text. Data are log differences of quarterly averages. OLS regressions run as a 3rd order polynominal distributed lag on right-hand side variables: 12 lagged observations with *omission of concurrent observation.* Regression coefficients above are the sum of the 12 estimated coefficients for each lag.

major reason why all countries tend to experience the business cycle in common.

Price inflation in the United States

Besides influencing money growth in the rest of the world, the dollar exchange rate also reflects domestic money-market conditions within the United States. When expected *future* price inflation within the United States changes, the *current* demand for U.S. money is immediately affected. A sudden rise in the (international) demand for dollar assets as signaled by dollar appreciation should indicate to the Federal Reserve that the effective demand for U.S. money has risen and that general deflation will result if it doesn't respond (McKinnon, 1985.)

Thus we can isolate three closely related reasons why the rising dollar from 1981 to 1984 had such a powerful impact on U.S. price inflation.

(i) The effective demand for dollar assets in general, and U.S. money in particular, had increased; and

(ii) Foreign goods became cheaper in dollar terms, putting downward pressure on **U.S.** tradeable goods prices; and
(iii) Money growth in other industrial countries declined—adding to the worldwide deflationary pressure.

Consider the simple regression equations based on quarterly observations presented in Table 3:

$$(1)\ \dot{P}^{US} = C + \sum_{i=1}^{12} a_{-i}\, \dot{M}^{US}_{-i} + u$$

and

$$(2)\ \dot{P}^{US} = C + \sum_{i=1}^{12} a_{-1}\, \dot{M}^{US}_{-i} + \sum_{i=1}^{12} b_{-i}\, \dot{E}^{US}_{-i} + v$$

where dots over the variables indicate percentage rates of change. $\dot{P}^{US}$ is the **U.S.** price level measured alternatively by the WPI and the **GNP** deflator; $\dot{M}^{US}$ is narrow money as defined by **U.S. M1**; and $\dot{E}^{US}$ is the (nominal) effective exchange rate of the dollar measured against the currencies of 17 other industrial countries (MERM weighted) as tabulated by the International Monetary Fund.

Equation (1) shows how well **U.S.** money by itself predicts **U.S.** prices for 12 quarters into the **future** (using a third order **polynominal** distributed lag.) During "fixed" exchange rates from 1962:Q2 to 1973:Q3, this **equation predicted U.S.** price **inflation quite** well: R^2 is of the order of .50 and the regression coefficients on $\dot{M}^{US}$ are significantly positive and close to one.

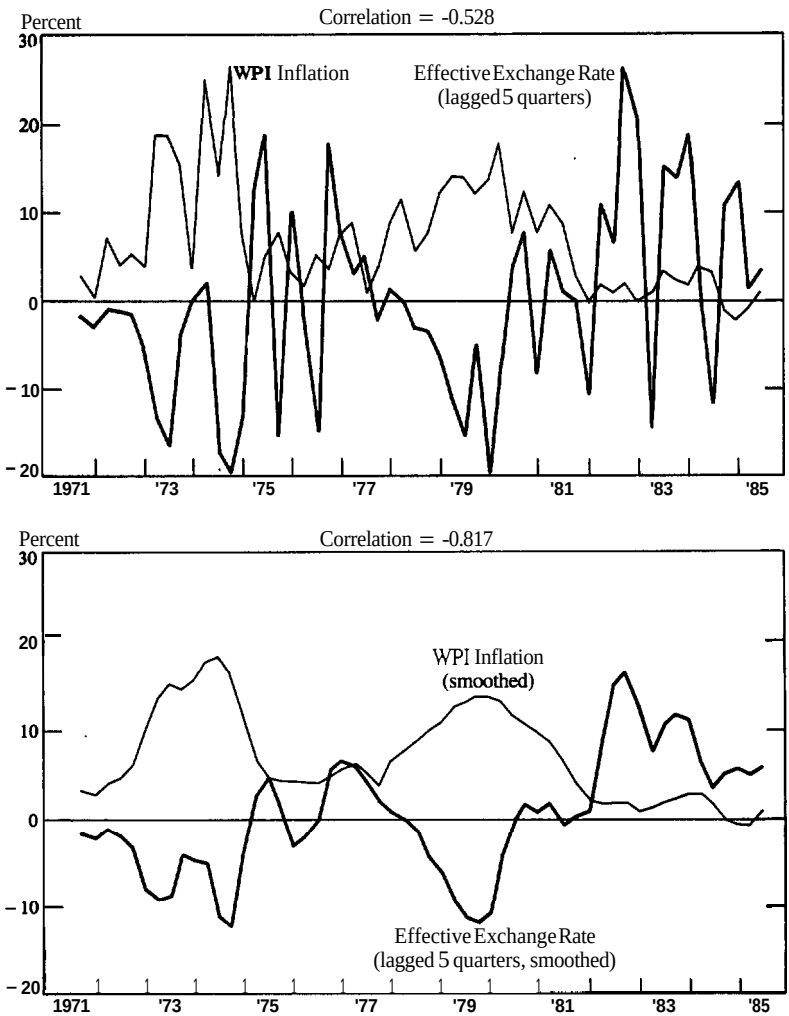
Then, during floating exchange rates from 1973:Q2 to 1984:Q4, this basic monetarist **explanation** of **U.S.** prices breaks down. The R^2 of **Equation** (1) become insignificant as do the regression coefficients on $\dot{M}^{US}$— and serial correlation in the residuals becomes **dominant**—as if some significant explanatory variable had been omitted.

But, as shown in Equation (2), consider adding the dollar exchange rate as an additional explanatory variable to reflect both changes in the demand for **U.S.** money and international inflation or deflation. Then, the statistical significance of the basic equation explaining the **U.S.** price level is restored. R^2 is again about 0.50 and serial correlation is much diminished because of the highly negative effect of the dollar exchange rate on the **U.S.** price level.

Indeed, Table 3 shows that a one percent appreciation of the dollar eventually (after 12 quarters) reduces inflation in **U.S.** tradeable goods (as measured by the WPI) by 1.07 percentage points, and reduces inflation in the

FIGURE 3

U.S. Effective Exchange Rate and WPI



GNP deflator by about 0.34 percentage points. These are big numbers if one remembers that it is not unusual for the dollar to change ten or 20 percent in the course of a year.

Figure 3 gives a more precise idea of the (negative) lagged effect of the dollar exchange rate on the WPI which reaches a maximum five quarters later. The solid line representing changes in the dollar exchange rate is sim-

ply displaced five quarters to the right. One can see that the negative correlation between the WPI and the dollar exchange rate five quarters earlier is very strong. The lower panel of Figure 3, based on five-quarter moving averages of both variables, shows this negative correlation rather vividly. One gets similar negative correlations between the U.S. GNP deflator and dollar exchange rate after about an eight-quarter lag.

Implicit versus explicit monetary coordination with other countries: A concluding note

Clearly, the U.S. Federal Reserve System should take a more open-economy approach to the problem of stabilizing the U.S. price level;. But it would be a mistake to completely jettison monetarist rules governing domestic money growth: people still need forward assurance of what the monetary authority plans to do. A more ad *hoc* monetary strategy, even one where the dollar exchange rate was given some (indeterminate) weight, could add to uncertainty about the future and make the current demand for dollar assets—including money—more volatile.

Consider the following simple rules which could be unilaterally announced by the U.S. monetary authorities:

(1) The Federal Reserve would continue for the year ahead to project "normal" noninflationary growth in the major U.S. monetary aggregates—say, four to six percent growth in M1.

(2) However, if the dollar was unusually strong in the foreign exchange markets, U.S. money growth would increase beyond its norm until the dollar came down-and vice versa.

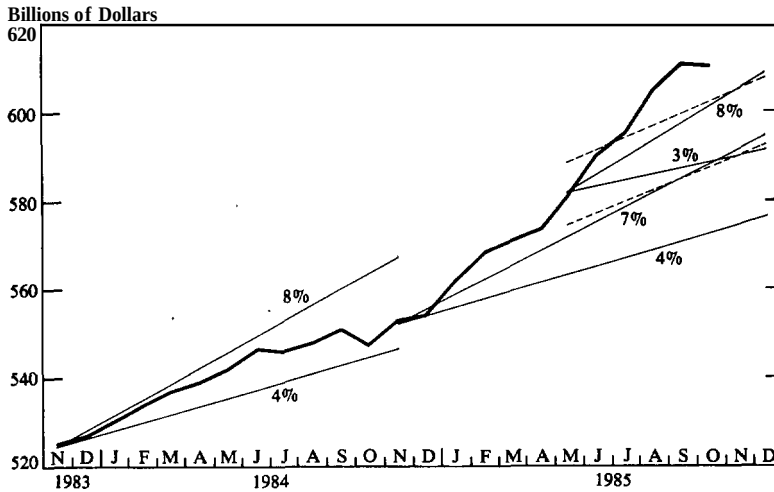
If it had followed such a procedure, the Federal Reserve could have greatly meliorated-perhaps largely avoided-he two great inflations of 1973-74 and 1979-80 by contracting in 1971-72 and again in 1978-79. Similarly, by expanding more in late 1981 and early 1982, the Federal Reserve could have avoided the unusually rapid deflation of 1982-83.

Most recently, by failing to respond to the sharp run-up of the dollar in 1984 by monetary ease, the Federal Reserve imposed undue deflation on U.S. tradeable goods industries and a slowdown in real growth in the U.S. economy in 1985. The Federal Reserve has certainly eased in 1985, as shown in Figure 4, but a bit late given that the exchange rate signal occurred much earlier.

Under Equation (2) above, the Federal Reserve could go one step further. Exchange rate targets against hard foreign moneys could be made more precise through some purchasing power parity calculation. Elsewhere, I and others (McKinnon, 1984, and Williamson, 1983) have suggested "soft" target zones—for example, aiming to keep the dollar within 2.1 to 2.3 marks, and between 200 to 220 yen in 1985.

FIGURE 4

The Elusive Money-Supply Target



Once the dollar moved outside these zones, the Federal Reserve would be obligated to alter its monetary stance. If the Federal Reserve clearly announced its new strategy, private expectations would then more readily coalesce around the exchange rate target—making the rate naturally more stable. Protectionist pressure in the **U.S.** economy would abate once the "real" price of dollars in terms of foreign currencies was confined to a narrow band which properly aligned the U.S. price level with those prevailing in other industrial countries.

Although I believe that having the Federal Reserve unilaterally key on the dollar exchange rate would better stabilize the **U.S.** price level (and the world economy more generally), this hypothesis does rest on the assumption that ***implicit*** monetary cooperation by other central banks will continue. That is, when the dollar is unusually strong, other industrial countries would slow their money **growth** to smooth their exchange rate—and then speed up when the dollar became weak-as Figure 2 indicates they have done in the past.

However, suppose now the Federal Reserve officially adopts our new monetary strategy of keying on the dollar exchange rate ***without any explicit agreement*** on international monetary coordination. Although not necessarily likely, other central banks might now relax and not take symmetrical action to smooth their dollar exchange rates. Let the Federal Reserve do it!

For example, if in 1984 the Federal Reserve had embarked on a major

monetary expansion in response to the strong dollar, other central banks might have expanded in parallel—or at least not contracted as they actually did (Figure 2). Then, not only would the dollar not have come down in the foreign exchange market, but there could have been too much monetary expansion overall—leading to worldwide inflation in 1985-86.

To deal with this dilemma, the Federal Reserve could informally monitor what other central banks are doing. If they (unexpectedly) expanded in parallel with the Federal Reserve when the dollar was strong, the Federal Reserve would be forced to lay off somewhat and give the exchange rate less weight.

Far better to secure an explicit agreement among the Federal Reserve, the Bank of Japan, and the Bundesbank (representing the European bloc) to react symmetrically to pressure on the dollar exchange rate (see McKinnon 1984, Chapter 5.)[1] Under such an agreement, only the Federal Reserve would be forced to substantially revise its operating procedures from an "insular" to an open-economy mode. And, international altruism aside, having the Federal Reserve key on the dollar exchange rate would be very much in the United States' own best interests.

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[1] In Chapter 5 of *An International Standard for Monetary Stabilization* (1984), I have outlined a more complete set of rules as one possible basis for such an agreement. The ultimate objective is to secure the mark/dollar and yen/dollar exchange rates, while stabilizing the three countries' common price level measured in terms of tradeable goods.

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