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U.S. Economic Policy in the 1980s

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International Dimensions of U.S. Economic Policy in the 1980s

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In recent years, greater attention has been given to the international coordination of monetary and fiscal policies largely because of movements in the foreign exchange value of the dollar and the increase in the U.S. trade deficit. The emphasis on monetary and fiscal policies reflects the view that both types of policies contributed to these developments. Policy coordination implies a greater international dimension to the economic policies of the U.S. and other major countries. However, the impact of international considerations probably will be limited since the goals of policy coordination can be expected to be consistent with individual countries' domestic goals. In the case of U.S. monetary policy, although added attention has been given to international developments, policy appears to have remained consistent with traditional domestic goals.

In late 1982, the U.S. economy began what has become its longest peacetime expansion. Since then, real GNP growth has been moderate to robust, unemployment in the U.S. has fallen sharply, and inflation has been moderate. However, with the economy at or beyond full employment in early 1989, the threat of an acceleration in inflation became a concern.

Despite generally favorable domestic statistics, other developments over the course of the current expansion raised concerns in the U.S. and among many of its major trading partners. In particular, international attention has focused both on the foreign-exchange value of the dollar, which soared and then plummeted during the 1980s, and the high and persistent U.S. trade deficit.

While differences of opinion abound concerning the implications of exchange rate movements and trade imbalances, it is clear that these developments have sparked interest in greater international coordination of monetary and fiscal policies. The international emphasis on monetary and fiscal policies reflects the view that both types of policies have contributed to movements in exchange rates and trade imbalances.

This paper examines U.S. economic policy in the 1980s in relation to the foreign exchange-value of the dollar, the U.S. trade deficit, and the international coordination of monetary and fiscal policies. The first section examines the theoretical arguments and some of the empirical evidence on the effects of U.S. monetary and fiscal policies on the value of the dollar and the U.S. trade balance. The second section takes a critical look at prospects for relying on international coordination of policies. The third section examines the extent to which the goals of international policy coordination have been consistent with U.S. domestic policy goals. A summary and conclusions are presented in the last section.

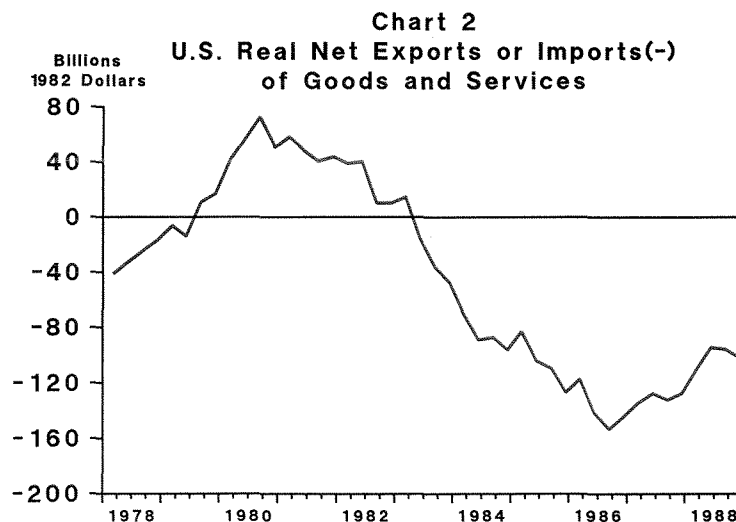
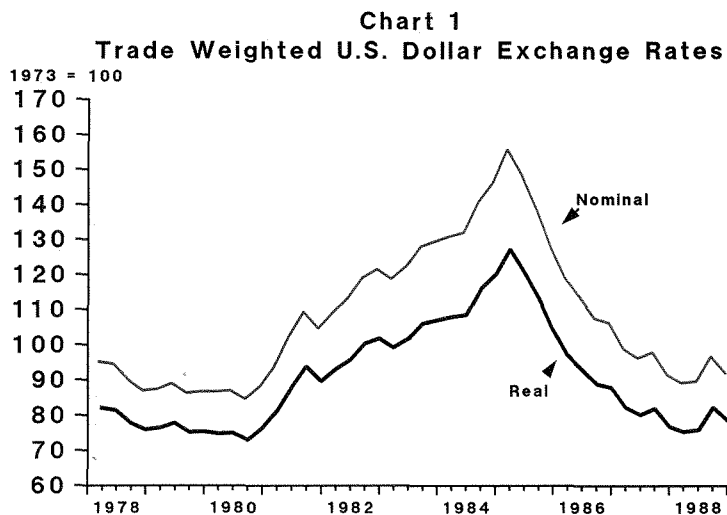
I. The Effects of Monetary and Fiscal Policies

The swing in the foreign-exchange value of the dollar in the 1980s has been dramatic. Chart 1 traces the index for the nominal multilateral trade-weighted U.S. dollar exchange rate from the Board of Governors of the Federal Reserve and its real exchange rate counterpart. Both measures show a prolonged run-up through February 1985, then a sharp drop through the end of 1987, and a subsequent mild rebound in 1988.

As the dollar appreciated in the early 1980s, the U.S. trade position deteriorated. As seen in Chart 2, the U.S. moved from a trade surplus in real goods and services of close to \$80 billion (annual rate) at the end of 1980 to a deficit of about \$150 billion in late 1986. Since then, the

trade deficit in 1982 dollars has improved some, but as of the end of 1988, the deficit still was substantial, even though the real exchange value of the dollar moved back close to its level in 1980.

The sharp changes in the value of the dollar and the deterioration in the U.S. trade position have sparked debate over their causes. Part of the debate is over the roles of monetary policy versus fiscal policy. This section considers theoretical arguments and empirical evidence concerning the relationship between movements in exchange rates and the U.S. trade deficit, on the one hand, and on the other, first, monetary policy and, then, fiscal policy.



Real Exchange Rates and Monetary Policy

Monetary policy and real exchange rates are connected through the effects of monetary policy on real interest rates. Generally it is recognized that monetary policy can affect real interest rates in the short run. Given its effects on real interest rates, the link between monetary policy and the real exchange rate can be derived from the uncovered interest parity condition.¹

In its simple form, the uncovered interest parity condition posits that, with free mobility of financial capital and perfect substitutability between foreign and domestic assets, the difference between the log of the current nominal exchange rate and the log of the future expected nominal exchange rate is a function of the difference between domestic and foreign nominal interest rates.² However, by introducing current and expected prices (foreign and domestic), the parity condition can be transformed into an expression in which the *real* value of the dollar in the current spot market is a function of two factors: 1) the difference between U.S. real interest rates and foreign real interest rates; and 2) the expected future exchange rate. That is,

$$\log q_t = n(r_t^d - r_t^f) + E_t(\log q_{t+n}),$$

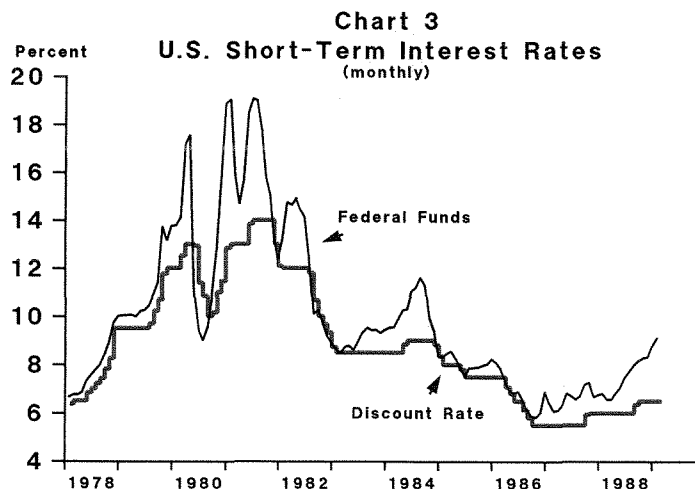
where q_t is the real exchange rate (units of foreign currency per unit of domestic currency deflated by the ratio of foreign prices to domestic prices), r_t^d is the real domestic (U.S.) interest rate on securities with maturity n , r_t^f is the real foreign interest rate on securities of comparable risk and maturity, and $E_t(\log q_{t+n})$ is the current expected value

of the log of the real exchange rate n periods in the future.³

Tight monetary policy in the U.S. relative to that in other economies could contribute to an appreciation of the dollar by raising U.S. interest rates relative to those in other countries. With the free flow of financial capital, the higher U.S.-foreign real interest rate differential would induce gross capital flows that would cause the real value of the dollar to appreciate.

To the extent that U.S. monetary policy affects the real exchange rate through changes in the real interest rate differential, the impact should not be permanent. That is, in the above expression for the real exchange rate, for a large enough n , the expected real exchange rate should not be affected.⁴ Allowing for shorter-run effects, however, the tightening of U.S. monetary policy that commenced in the Fall of 1979 had the potential to have a major impact on the value of the dollar.⁵

Depicting the extent of this and other changes in monetary policy in the 1980s *via* the monetary aggregates is complicated by the distortions from financial innovations and deregulation.⁶ It is better, therefore, to use movements in nominal and real short-term interest rates to characterize changes in monetary policy, though these are not ideal indicators, either. As shown in Chart 3, the nominal interest rate on federal funds increased sharply in late 1979, apparently in response to the tightening of monetary policy that occurred then. In the second and third quarters of 1980, the federal funds rate and other interest rates were distorted by the Credit Controls of the Carter Administration. Interest rates were temporarily reduced by the artificial constraints on bank credit expansion, but they bounced back in late 1980 as monetary policy remained taut.



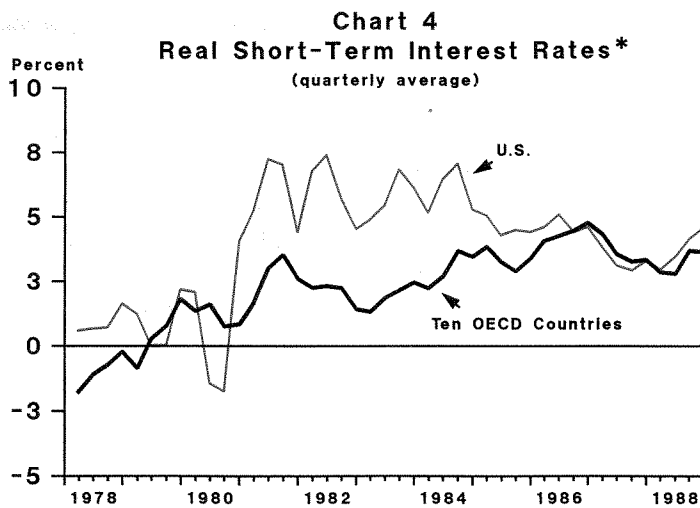
The behavior of real interest rates also is consistent with a tightening of monetary policy in late 1979. Although the measurement of *ex ante* real interest rates is complicated by the need for reliable measures of expected inflation, there is little doubt that U.S. real interest rates had increased by 1981. Assuming that the expected inflation rate for a current quarter is based on the inflation rate prevailing over the previous year, Chart 4 reveals that short-term real interest rates jumped up in the 1980s from levels prevailing in the late 1970s.

At the same time, real interest rates in other major countries also rose, but by less than real interest rates in the U.S. Consequently, as shown in Chart 5, the differential between real interest rates on short-term, private, dollar-denominated instruments and rates on comparable instru-

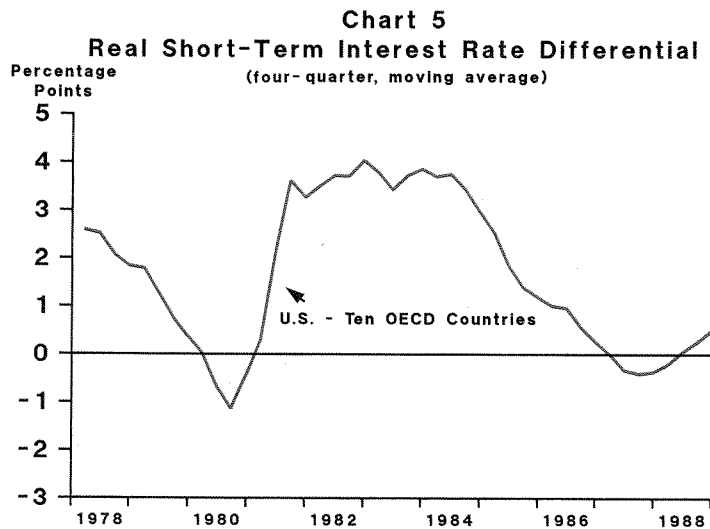
ments denominated in other key currencies rose in the early 1980s. Throop (1988) finds a similar pattern for estimates of differentials on long-term real interest rates.

From the expression for the real exchange rate presented earlier, a rise in U.S. real interest rates relative to those of other economies would appreciate the U.S. dollar. Indeed, simulation results using the Federal Reserve Bank of San Francisco's structural macroeconomic model show that much of the appreciation of the dollar in the early 1980s is attributable to the differential between U.S. and foreign long-term interest rates. Helkie and Hooper (1988) report similar results regarding the effects of interest rate differentials.

Tying the continued climb in the real exchange value of the dollar beyond 1982 to tight U.S. monetary policy, how-



*Real rates are the nominal rate less the percent change in CPI over the previous four quarters. The U.S. rate is based on the three-month commercial paper rate. The rate for the OECD countries is based on a trade-weighted average of private market rates.



ever, is somewhat more tenuous. It generally is thought that the episode of tight monetary policy persisted only through mid-1982. The evidence usually cited to support this view is the sharp drop in the federal funds rate at that time. The conventional view, however, has to be seen in light of the rebound in *real* interest rates during 1983, shown in Chart 4. The behavior of real interest rates suggests that, through mid-1984, the effective easing in monetary policy may have been less than that indicated by the movement in nominal interest rates. As discussed below, this may have been due to other factors, such as fiscal policy, that were affecting real interest rates.

Whatever the sources of influence on real interest rates, the important point for exchange rate determination is that the spread between U.S. real interest rates and foreign interest rates was fairly constant from 1981 through mid-1984 (Chart 5). This suggests that the real interest rate differential was not contributing to the *further* appreciation of the dollar that occurred through early 1985.

From early 1985 through early 1987, however, the movements in nominal and real short-term interest rates suggest a period of monetary accommodation in the U.S., as most observers have acknowledged. During that period, the U.S.-foreign real interest rate differential fell and the dollar depreciated sharply, as would be expected from the expression for the real exchange rate that was derived from the uncovered interest parity condition. Likewise, the behavior of the real interest rate differential and the dollar in 1987 and 1988 are in keeping with the movement toward tighter U.S. monetary policy, which also is reflected in the rises in nominal and real interest rates during the period.

Real Exchange Rates and Fiscal Policy

The theoretical effects of fiscal policy (that is, the nexus of government taxation and spending decisions) on real exchange rates depend on a number of factors. From Mundell (1963) and Fleming (1962), an increase in domestic government spending will appreciate a domestic currency if financial capital is highly mobile, but the currency will depreciate if capital is not very mobile. Sachs and Wyplosz (1984) also show that, in theory, the effect of fiscal policy on the real exchange rate depends on other factors such as wealth effects.

Nevertheless, the widely held view is that an expansionary U.S. fiscal policy will lead to an appreciation of the real value of the dollar. Evidence from Bryant *et. al.* (1988) supports this view. In the Brookings Institution project, which involves simulation experiments with 12 of the better-known multicountry econometric models, fiscal policy is defined in terms of government spending. The

simulation results from the models indicate that an expansionary U.S. fiscal policy causes the real exchange value of the dollar to increase.⁷

Typically, the effect of fiscal policy on the real exchange rate is seen as stemming from changes in the differential on domestic and foreign interest rates. The argument is that an expansionary U.S. fiscal policy stimulates the U.S. economy more than it stimulates other economies, and, thus, causes the domestic real interest rate to increase relative to foreign real interest rates.

Real exchange rates also can be affected by fiscal policy through a second channel. Hutchison and Pigott (1984) and Hutchison and Throop (1985) emphasize that, even without an effect on the real interest rate differential, an expansionary U.S. fiscal policy can raise the level of the real exchange rate that is expected to persist over the longer run.

This can happen if goods markets are slow to adjust and U.S. and foreign goods and services are not perfect substitutes. Under these conditions, an expansionary fiscal policy in the U.S. (relative to that of the rest of the world) can increase the relative demand for U.S.-produced goods. Even when world real interest rates are equal, capacity constraints on the production of goods and services in the U.S. would mean an appreciation of the real value of the dollar in order to eliminate the excess real demand for U.S. goods and services.⁸ Then, as long as the expansion in fiscal policy were expected to persist, the real exchange rate expected in the future would rise. From the expression for the real exchange rate presented earlier, the higher expected real exchange rate would mean a higher real exchange rate today.

These arguments suggest that the shift to a more expansionary fiscal policy in the 1980s could have contributed to a higher real value of the dollar. With the 1981 Tax Act, the Reagan Administration embarked on a program of tax reform that was intended to spur economic growth. The program cut tax rates, which reduced revenues, and introduced a less progressive tax rate schedule. However, the tax program had little in the way of offsetting spending cuts. In fact, high-employment federal spending as a percent of high-employment GNP rose through 1986 (Chart 6). The Tax Act also led to a jump in the federal high-employment deficit after 1981. As seen in Chart 7, the budget deficit rocketed from \$30-\$40 billion in the late 1970s to over \$200 billion in 1986. As a percent of high-employment GNP, the high-employment budget deficit reached a peak of over five percent.

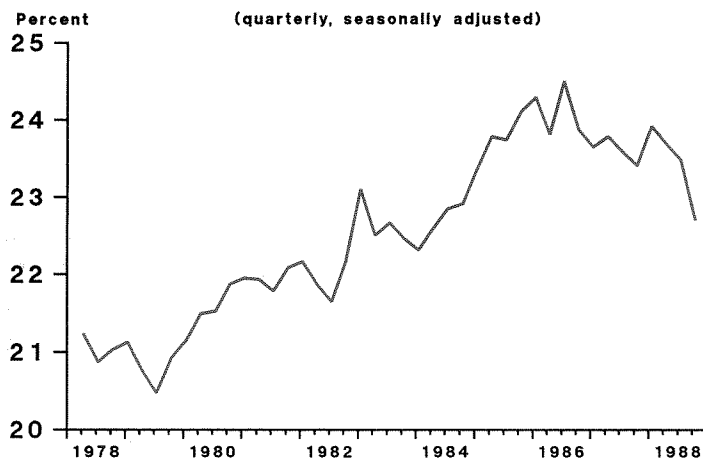
Some have questioned whether the rise in the fiscal budget deficit *per se* was expansionary.⁹ Nonetheless,

Hutchison and Throop (1985) and Throop (1988) present persuasive empirical evidence that the federal fiscal deficits have affected the real exchange rate. Both studies emphasize the effects of fiscal deficits working through changes in the long-run expected real exchange value of the dollar, rather than through changes in the real interest rate differential.¹⁰ Their findings indicate that, relative to fiscal tightening in other countries, the prolonged fiscal expansion associated with the rise in the U.S. budget deficit after 1982 caused the expected exchange value of the dollar to rise and led to the continued rise of the dollar between 1982 and early 1985. Throop (1988) maintains

that the imbalances between foreign and domestic fiscal policies also worked to buoy the value of the dollar through 1986, although after February 1985, the real value of the dollar fell in response to the decline in the real interest rate differential.

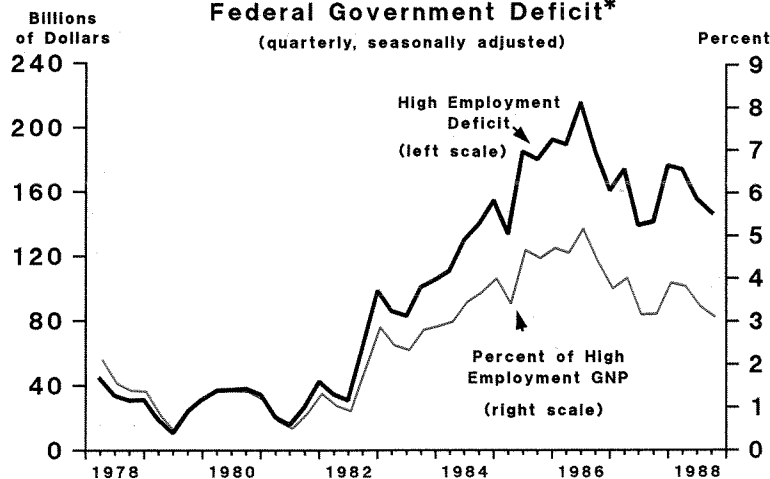
Since 1986, fiscal policies internationally have been somewhat more balanced. In late 1985, the Congress and the Administration "committed" to reduce the budget deficit through a resolution and subsequently the Gramm-Rudman-Hollings bill in December 1985. In part due to the Gramm-Rudman-Hollings constraints, U.S. fiscal policy has become less expansionary as measured by the high-

Chart 6
High Employment Federal Spending*
to High Employment GNP
 (quarterly, seasonally adjusted)



*High employment deficit and GNP are based on a six percent unemployment rate.

Chart 7
High Employment
Federal Government Deficit*
 (quarterly, seasonally adjusted)



*High employment deficit and GNP are based on a six percent unemployment rate.

employment deficit as well as by high-employment spending. Moreno (1988) also points out that there has been some expansion of fiscal policy in other countries. He discusses the 6 trillion yen (1.8 percent of GNP) package of spending increases and tax cuts approved by the Japanese Cabinet in June 1987. Hutchison (1987) also identifies changes in Japanese policy. In addition, according to publications of the Organization for Economic Cooperation and Development (OECD), West Germany is projected to move toward increasing its budget deficit to 2¼ percent of GNP by 1992 from 1¾ percent in 1987.

Nevertheless, it is uncertain how fiscal imbalances will be resolved in the future. For example, the U.S. Congressional Budget Office projects the budget deficit to improve only slightly over the next five years (see Chart 8). If these projections are consistent with market expectations, fiscal policy likely still is holding up the expected, and, thereby, the current real exchange value of the dollar.

U.S. Trade Balance

The discussion so far has focused on the theoretical arguments and empirical evidence relating to the effects of monetary and fiscal policies on the real exchange rate. The impact of monetary and fiscal policies on the real trade balance also depends on how these policies affect overall spending. This is because real net exports for the U.S. are related to both the real exchange rate and real spending in the U.S. relative to that in other countries.

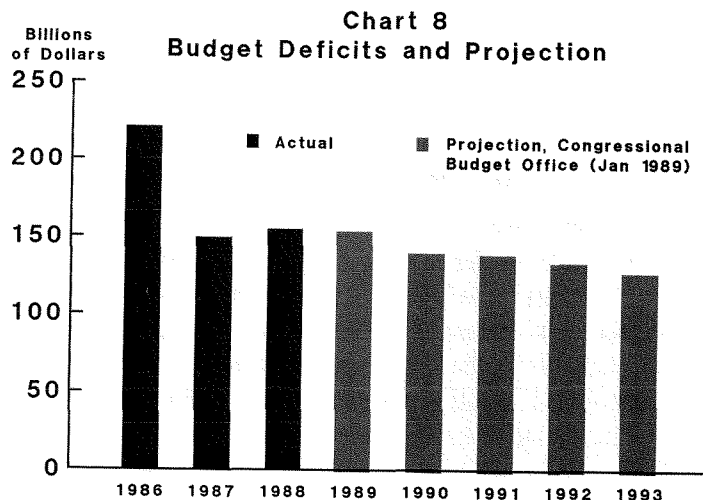
From the discussion above, tight U.S. monetary policy can lead to an appreciation of the dollar because of a higher U.S. real interest rate. But the higher real interest rate also tends to dampen U.S. real spending relative to that in other countries. While the first effect would mean higher imports

relative to exports, the second would have the opposite effect.

The ambiguous effect of monetary policy on the U.S. trade balance carries over to the empirical evidence from the Brookings Institution project. In Bryant *et. al.* (1988), some of the model simulations suggest that tight monetary policy would increase the U.S. trade deficit, while others show the opposite result. On average, the results of the simulation show that monetary policy has close to a neutral effect on the U.S. trade balance. Therefore, even if monetary policy affected the real foreign exchange value of the dollar in the 1980s, it may not have contributed much to the higher real trade deficit. This also means that explicit attempts to influence the trade deficit by changing exchange rates through monetary policy might meet with only limited success.

In contrast, theory says that expansionary fiscal policy can appreciate the dollar and raise U.S. spending relative to that in other countries. Given that it appreciates the real dollar exchange rate, expansionary U.S. fiscal policy relative to that in other countries should have unambiguous effects: such a policy should reduce U.S. net exports.¹¹

The results in Bryant *et. al.* (1988) support this view of the effects of fiscal policy. Most of the models indicate that the U.S. trade balance is negatively related to U.S. fiscal policy. Moreover, other empirical studies have found that much of the rise in the U.S. trade deficit in the 1980s can be traced to expansionary U.S. fiscal policy. Throop (1988), for example, finds that about half of the increase in the U.S. trade deficit in the 1980s can be traced to the fiscal policy imbalance between the U.S. and other countries.¹² That study also finds that a reduction in the U.S. budget deficit from \$230 billion in 1986 to about \$150 billion by 1987 contributed significantly to the improvement in the U.S. trade deficit since 1986.



II. Implications for Policy Coordination

Recognition that monetary and fiscal policies can affect exchange rates and trade balances is one reason more attention is being given to the international repercussions of these policies. The recent attempts at international economic policy coordination involving the U.S. grew out of the G-5 (U.S., Germany, Japan, Britain, and France) Agreement in September 1985.¹³ That meeting specifically was motivated by a desire on the part of the participants to depreciate the dollar further. By September 1985, the dollar had depreciated considerably from its peak in February 1985, but still was considered too high to resolve world trade imbalances. In addition, the decline in U.S. real net exports, which eventually hit a low in late 1986, was thought to have created imbalances among sectors of the U.S. economy, raising prospects for protectionist measures by the U.S. against its trading partners.¹⁴ Finally, there was concern over the long-run implications of U.S. reliance on foreign financing.¹⁵

The September 1985 Agreement called for the coordination of both fiscal and monetary policies to affect exchange rates and the trade imbalance. The discussion in the previous section suggests that these efforts to reduce fiscal imbalances are reflected in the lower real U.S. trade deficit. However, most of the efforts at coordination have involved monetary policy, including domestic open market operations and unsterilized currency intervention,¹⁶ as well as sterilized currency intervention.¹⁷ The discussion in the previous section suggests that the coordination of monetary policies (and sterilized currency interventions), in contrast, probably has had a limited effect on trade imbalances.

But is there another interpretation of the role of monetary policy in international policy coordination? One interpretation is that its role is one of "stabilizing" exchange rates. When the dollar was depreciating sharply from early 1985 through 1986, exchange rate stabilization might be

characterized as aiming to smooth the downward adjustment in the value of the dollar—that is, preventing it from falling too rapidly. More recently, stabilization appears to be aimed at dampening short-run swings in the exchange value of the dollar.

There is some debate regarding whether it is appropriate to damp movements in exchange rates. In general, stabilization in this sense is appropriate when fluctuations in exchange rates mainly are due to temporary shifts in the demand for money (or financial assets more generally) among different countries.¹⁸ Such temporary shifts could be due to unstable investor demands for individual currencies. In this case, a shift in preferences toward holding dollar assets would tend to appreciate the dollar and call for a relative easing in U.S. policy. On the other hand, a shift in preferences away from dollar assets would call for U.S. policy to tighten in order to stabilize the dollar.

However, in the real world, we know that exchange rates also react to real shocks, both temporary and permanent, as well as to longer-run shifts in the demand for money and/or financial assets. Under these circumstances, the appropriate monetary response to movements in exchange rates requires policymakers to be able to quantify the relative importance of financial shocks and real shocks.¹⁹ It also requires policymakers to be able to distinguish *ex ante* whether exchange rate movements are due to temporary or permanent shocks.²⁰

To the extent that the impact of real shocks and shifts in long-run money demand are more important than the effects of temporary money (asset) demand shocks on exchange rates, gearing monetary policies to restrain the value of the dollar too narrowly will tend to destabilize economic growth and inflation. This is a serious problem since more appropriate goals of monetary policy, such as stabilizing nominal income growth or prices, would be subverted.

III. U.S. Monetary Policy and International Coordination

This last point is not meant to rule out the usefulness of international policy coordination in a broader context for the U.S. The U.S. has an open economy and, as Bryant *et al.* (1988) point out, monetary policy in other major countries can have real effects on the U.S. economy. Since the international transmission of the effects of policy depends in part on the stance of U.S. monetary policy relative to that of other countries, U.S. policymakers can be more effective if policies are coordinated in some broad sense.

However, it is not clear that exchange rates *per se* are the appropriate basis for such coordination. Indeed, the goals of the Federal Reserve, like those of most other central banks of countries with large open economies, are stated in terms of domestic variables, such as sustainable growth in the domestic economy and stable prices. International policy coordination clearly should not undermine or sacrifice these domestic goals. On the contrary, international agreements are possible only if the participants believe

such agreements make it more feasible to achieve domestic goals.

In this view, exchange rate considerations should influence policy if they are consistent with a country's domestic goals. To determine how this applies to the U.S., this section examines whether U.S. monetary policy since late 1985 was influenced by exchange rate considerations that were in conflict with domestic policy goals.

September 1985 Agreement

In the September 1985 Agreement among the G-5 countries, the concern was over the high value of the dollar

and the U.S. trade deficit. To the extent that the September Agreement made it more likely that the imbalances among the fiscal policies of the U.S. and its trading partners would improve, the appropriate response of monetary policy was to allow both real and nominal interest rates to fall. Consistent with these policy coordination goals, we did see a series of reductions in the U.S. discount rate and a more or less steady decline in the federal funds rate in 1986. However, this stance of U.S. monetary policy also was consistent with the goal of stimulating the domestic economy. In 1986, the unemployment rate was above seven percent, inflation was below three percent, and GNP growth was slow.

EXHIBIT

Order in which Policy Variables Appeared in the FOMC Directive

MEETING	FIRST	SECOND	THIRD	FOURTH	FIFTH
3/85 to 7/85	MONETARY AGGREGATE	STRENGTH OF EXPANSION	INFLATION	CREDIT MARKET CONDITIONS	EXCHANGE RATES
8/85 to 4/86	MONETARY AGGREGATE	STRENGTH OF EXPANSION	EXCHANGE RATES	INFLATION	CREDIT MARKET CONDITIONS
5/86	MONETARY AGGREGATE	STRENGTH OF EXPANSION	FINANCIAL MARKET CONDITIONS	EXCHANGE RATES	—
7/86 to 2/87	MONETARY AGGREGATE	STRENGTH OF EXPANSION	EXCHANGE RATES	INFLATION	CREDIT MARKET CONDITIONS
3/87	EXCHANGE RATES	MONETARY AGGREGATE	STRENGTH OF EXPANSION	INFLATION	CREDIT MARKET CONDITIONS
5/87	INFLATION	EXCHANGE RATES	MONETARY AGGREGATE	STRENGTH OF EXPANSION	—
7/87	INFLATION	MONETARY AGGREGATE	STRENGTH OF EXPANSION	—	—
8/87 to 9/87	INFLATION	STRENGTH OF EXPANSION	EXCHANGE RATES	MONETARY AGGREGATE	—
11/87	FINANCIAL MARKET CONDITIONS	STRENGTH OF EXPANSION	INFLATION	EXCHANGE RATES	MONETARY AGGREGATE
12/87 to 5/88	FINANCIAL MARKET CONDITIONS	STRENGTH OF EXPANSION	INFLATION	EXCHANGE RATES	MONETARY AGGREGATE
7/88	MONETARY AGGREGATE	STRENGTH OF EXPANSION	INFLATION	FINANCIAL MARKETS	EXCHANGE RATES
8/88 to 11/88	INFLATION	STRENGTH OF EXPANSION	MONETARY AGGREGATE	EXCHANGE RATES	FINANCIAL MARKETS

Another source of relevant evidence is the Federal Open Market Committee's monetary policy directives. Heller (1988) argues that the order in which the various economic variables are mentioned in the directive generally is consistent with the relative importance placed on these variables in monetary policy considerations. As shown in the Exhibit, which is updated from one in Heller (1988), the order in which exchange rates were mentioned in the directives was raised from fifth in the meetings of March 1985 through July 1985 to third in the meetings of August 1985 through April 1986. This evidence suggests that U.S. monetary policy placed greater emphasis on the exchange value of the dollar, in line with the objectives spelled out in the September 1985 Agreement.²¹

Louvre Agreement

The Louvre Agreement of February 1987 marked the explicit move to the objective of stabilizing exchange rates around their existing levels, rather than seeking to depreciate the dollar further. Since then, exchange rate policy has focused almost exclusively on monetary policy coordination.

As Cheng (1988) points out, the first nine months of 1987 do not provide us with a clear indication of the extent to which exchange rate considerations augmented purely domestic considerations. In 1987, the pressure on the dollar generally was downward. At the same time, real GNP growth was quite robust, inflation appeared to be on the rise, and the unemployment rate had fallen to about six percent by mid-year. Thus, the goal of exchange rate stabilization was consistent with domestic developments. Some tightening of policy was warranted, and the Federal Reserve did so throughout the Spring and again in September 1987.

One indication that exchange rates played a role in the FOMC's decision to tighten in 1987 is that, in the March and May 1987 meetings of the Committee, exchange rates were either the first or second item mentioned in the policy directive.

Stock Market Breaks

One instance in which U.S. policymakers paid little or no attention to exchange rate developments was after the price breaks in world stock markets in October 1987. The breaks reshaped the outlook for the U.S. economy. The substantial loss of wealth was expected to cut into consumption and housing demand, and business investment was expected to slow. Perhaps even more importantly, there was concern over a more general disruption to financial markets stemming from the stock break. A heightened

emphasis on the state of financial markets is consistent with the ordering of the policy variables in the FOMC's directives for the meetings just following the problems in the world stock markets. The response of the Federal Reserve was to inject liquidity into the market and to drive down interest rates, despite the downward pressure on the dollar. In this case, stabilizing the exchange value of the dollar was inconsistent with domestic developments, and the Federal Reserve acted solely on the basis of domestic concerns.

G-7 Agreement of December 22, 1987

The post-break employment developments in the U.S. provided the early signals that the sharp drop in equity values was not sending the U.S. economy into a tailspin. For example, from October to December 1987, the U.S. unemployment rate fell 0.2 percentage point to 5.8 percent. A softening of concern over the effects of the stock market break opened the door for resumption of international policy coordination. Efforts to support the dollar through currency intervention on the part of the G-7 (G-5 plus Canada and Italy) countries were resumed in late December 1987 and the first part of 1988.

However, clear signs of a tightening in U.S. monetary policy were not seen until somewhat later in 1988. Chart 3 shows that the federal funds rate remained in the 6½ to 6¾ percent range through March of 1988. The stability of short-term U.S. interest rates in the first part of 1988 is consistent with a continued concern over the condition of the U.S. economy, but not with a goal of boosting the value of the dollar.

Further into 1988, concerns over the dire effects of the stock market break faded considerably. For the first half of 1988, real GNP growth in the U.S. was over three percent (annual rate) and the unemployment rate, at 5.4 percent by July 1988, was at or below what most analysts view as the natural rate of unemployment. Consistent with the performance of the domestic economy, between March 1988 and the beginning of 1989, U.S. short-term interest rates rose by 250 to 300 basis points, reflecting in part tighter U.S. monetary policy.

The shift in policy in 1988, then, came only when it was fairly clear that the economy was strengthening and capacity constraints were signalling concern over inflation. Thus, although U.S. monetary policy may have affected the exchange value of the dollar in line with the objectives of policy coordination, the shift in U.S. policy apparently did not occur until domestic developments clearly warranted it.

IV. Summary and Conclusions

Movements in the foreign exchange value of the dollar and the increase in the U.S. trade deficit have fostered international agreements for policy coordination. The agreements call for the coordination of monetary and fiscal policies among the large open economies. While some progress has been made toward reducing fiscal imbalances between the U.S. and other major economies, most of the efforts at international coordination have involved monetary policy.

In the absence of further progress in reducing the U.S. fiscal deficit, it is questionable whether policy coordination can reduce world current account imbalances. While monetary policy can affect real exchange rates, it may not have much effect on real trade balances. This raises doubts about the appropriateness of centering the international coordination of monetary policy on the exchange value of the dollar, particularly in light of the difficulties involved in

discerning among various types of shocks to exchange rates. Rather, policymakers internationally should focus on the more appropriate roles of monetary policy, such as stabilizing nominal income growth or the price level. This would have implications for exchange rates, but under this approach, exchange rates would play only an indirect role in policy.

Since 1985, international coordination of monetary policies directed at affecting the exchange value of the dollar may have influenced the timing and perhaps the degree of specific moves to ease or tighten U.S. monetary policy. But, whatever attention has been paid to policy coordination, the U.S. experience suggests that monetary policy has been first and foremost consistent with domestic developments. This should not be surprising since, in the end, countries participate in policy coordination to further their own domestic interests.

NOTES

1. See Dornbush (1976), Frankel (1979), Hooper and Morton (1972), and Hutchison and Throop (1985).
2. With perfect capital mobility and asset substitutability, the uncovered interest parity condition is

$$\log s_t - E_t(\log s_{t+n}) = n(i_f^d - i_f^f),$$

where

- s_t = the current nominal exchange rate (units of foreign currency per unit of domestic currency).
- i_t = the nominal interest rate on a security with maturity n (d denotes domestic and f denotes foreign).
- $E_t(s_{t+n})$ = the expected value at time t of the nominal exchange rate n periods ahead.

If domestic and foreign assets are not perfect substitutes, the expression above also would include a risk-premium term.

3. See Hutchison and Throop (1985) for a discussion of the uncovered interest parity condition and the determination of the real exchange rate.
4. If n is small, changes in monetary policy could affect the expected inflation term. See Bryant *et. al.* (1988) for estimates of the effects of a change in monetary policy on exchange rates and foreign and domestic prices.
5. The change in monetary policy was accompanied by the adoption of nonborrowed reserves targeting operating procedures by the Federal Reserve from October 1979 through mid-1982.
6. See Judd and Trehan (1987) for an analysis of the behavior of the aggregates in the 1980s.
7. Reporting on the effects of a contraction in fiscal policy in Bryant *et. al.* (1988), it is stated: "All models simulated sustained declines in U.S. interest rates adjusted for inflation relative to ROECD (other OECD countries); that change in the real interest rate differential works to depreciate the inflation-adjusted value of the dollar."
8. In the case of increased government spending, for example, the higher value of the dollar would work to offset higher U.S. government demand for goods and services by reducing private demand (both domestically and in other countries) for U.S.-produced goods. The change in private demand would result in a deterioration in U.S. net exports. In this way, the appreciation of the dollar allows goods markets to clear.

As Hutchison and Pigott (1984) point out, this effect also could be associated with an expansionary fiscal policy resulting from a revision in tax laws that increased the after-tax return on investment, even if the fiscal budget balance were not affected. In this case, the increase in relative demand for domestic goods would come from private investment.

9. The neo-Ricardian theory, popularized by Barro (1974), holds that the method used to finance government spending (taxing or borrowing) does not affect aggregate demand. The argument is that if the government relies on debt, rational taxpayers will anticipate higher future taxes and adjust their saving accordingly. The increase in saving will exactly meet the increase in government borrowing. This should leave the real interest rate and real exchange rates unaffected.

One hypothesis that is consistent with the neo-Ricardian framework is that U.S. fiscal policy in the 1980s was expansionary because the changes in marginal tax rates made investment in U.S. assets relatively more attractive. This, in turn induced capital flows, the appreciation of the dollar and the increase in the trade deficit. It is not clear, however, that investment relative to GNP in the U.S. has been extraordinary during the current expansion. One possible explanation is that the effects of the lower tax rates on investment demand were offset by much higher real interest rates in the 1980s.

10. There is considerable debate, both at the theoretical and empirical levels, concerning the effects of fiscal policy on interest rates. Hutchison and Pyle (1984), for example, find that short-term real interest rates are systematically and positively related to central government fiscal budget deficits. Evans (1985), on the other hand, argues that the empirical evidence for the U.S. does not support the view that higher nominal interest rates are associated with large fiscal deficits.

11. The different implications of monetary and fiscal policy for the trade balance also may provide a partial explanation for the slow adjustment of the U.S. trade deficit and for its persistence through 1988, despite the sizable drop in the value of the dollar. The decline in real net exports was not reversed until the last quarter of 1986 (Chart 2). That is somewhat longer than the average lag in the response of net exports to a change in the real exchange rate. This longer lag is consistent with the argument that the drop in the exchange rate in 1985 was related mainly to real interest rate changes reflecting a relative easing of U.S. monetary policy, rather than a correction in the international imbalances in fiscal policies.

This cannot be the whole story, however. Even when the effects of monetary policy on income and exchange rates are taken into account, macroeconomic models tend to overestimate the improvement in the U.S. trade balance. Other factors contributing to the slow adjustment in the U.S. trade deficit are slower passthroughs of import prices and the increased importance of the Newly Industrialized Economies for which the dollar has depreciated less compared to, say, the G-10 countries. These factors are discussed in Glick (1988) and Moreno (1986).

12. Though difficult to quantify, the trade imbalance also may be related in part to factors such as trade barriers and international debt problems. Trade barriers reduce the

total amount of international trade, and bilateral effects depend on the relative strengths of the barriers. To the extent that the net effect of trade barriers is to reduce the U.S. share of exports, the U.S. net export position would shrink. International debt problems could reduce U.S. net exports by lowering the demand for U.S. goods, if the reduction in lending to LDCs with debt problems limits their ability to finance trade deficits and forces them to cut back imports. In addition, the trade deficit may have been affected by more attractive U.S. investment opportunities.

13. Glick (1986) discusses the motivations behind these policy actions and alternative ways of conceptualizing policy coordination.

14. This view is expressed in Johnson (1986). However, Glick and Hutchison (1988, 1989a) present evidence that suggests that the appreciation of the dollar did not deindustrialize the U.S. economy. During the 1980s, manufacturing output relative to GNP has been stable.

15. The implications of the high U.S. trade deficit and the corresponding U.S. reliance on foreign financing depend on how domestic spending has been affected. To the extent that the trade deficit has come about because of higher U.S. investment, our reliance on foreign financing does not represent a fundamental problem. Higher investment today creates the productive means for repaying our foreign debt without detracting from the standard of living in the U.S. in the future. On the other hand, those that express concern over the trade deficit argue that the foreign funds are being used to finance higher private and government consumption. This would mean that foreign borrowing is creating a burden which can be met only by a reduction in the standard of living in the U.S. in the future.

16. See Hoskins (1989).

17. When a central bank increases or decreases its holding of foreign-denominated assets using unsterilized in-

tervention, it changes its reserve liabilities. The effects on the supply of money are similar to those of open market operations in which the central bank changes its holdings of assets denominated in the domestic currency. Under sterilized intervention, in contrast, the money supply is not affected. In this case, the balance sheet of the central bank would show a swapping of assets denominated in domestic and foreign currencies, without a change in reserve liabilities.

18. See McKinnon 1982, 1985.

19. See Glick and Hutchison, this issue of the *Economic Review*.

20. One important situation in which policymakers would have information regarding the reason for a movement in exchange rates is if further progress is made in reducing the fiscal imbalances. In that case, monetary policy would have a role as an adjunct to the adjustments in fiscal policy. As argued above, to the extent that policy coordination is aimed at significantly reducing the trade imbalance, its root cause, the international fiscal imbalance, must be addressed. Assuming that most of the adjustment comes from a tightening of U.S. fiscal policy, the trade deficit would be reduced by the combination of a lower real interest rate, a lower real exchange value of the dollar, and lower U.S. spending. In this context, U.S. monetary policy should facilitate the drop in nominal interest rates as real interest rates decline. Obviously, the international coordination of monetary policy should not attempt to stabilize the real exchange value of the dollar, but it should allow the depreciation of the dollar stemming from fiscal policy changes to proceed.

21. More recently, in testimony before the Congress, Federal Reserve Chairman Alan Greenspan also indicated the importance of the exchange value of the dollar in U.S. monetary policy.

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