

# International Dimensions of Monetary Policy: Coordination Versus Autonomy

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## Introduction

If each of the major industrial countries independently conducted its monetary policy in a stable, noninflationary way, would exchange market stability emerge as a byproduct? What sacrifice to the ultimate goals of monetary policy would be associated with the coordinated pursuit of greater exchange rate stability? How much flexibility of fiscal policy is necessary to avoid over-burdening monetary policy? What assistance can be obtained from sterilized official exchange market intervention, and will such intervention be effective if it is concerted? Will removal of capital controls where they still remain, as well as the more general global integration of capital markets, restrict unduly the room for maneuver of monetary authorities? Would a moderate increase in nominal wage-price flexibility be sufficient to deal with typical real economic shocks that might impinge on wider currency areas? Is there a need for an explicit nominal anchor under managed floating and if so, what form should it take?

None of these are new questions. Yet events of the past five years have underscored their continuing relevance. During this period monetary authorities of major industrial countries have been faced with the multifaceted task of: (1) containing inflationary pressures

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at a time of high rates of capacity utilization; (2) promoting a configuration of domestic demand and output growth that would reduce large current account imbalances among the three major countries; (3) lending support—via both exchange market **intervention** and coordinated adjustments in interest rates—to **G-7** pronouncements on the appropriate pattern of exchange rates; and (4) preventing the synchronized equity market crash of October 1987 from generating either widespread financial market failures or a slide into global recession. Moreover, this tall order has been placed against a backdrop in which the relationship between monetary aggregates and income has become less predictable,<sup>1</sup> fiscal policy has evolved according to its own, slower biological **clock**,<sup>2</sup> and the debt problem of developing countries has made for an increased sensitivity to the level of world interest rates. Last but not least, monetary authorities in European Community (EC) countries have been engaged in preparations for the single European market in goods and financial services in 1992, and in discussions regarding monetary union.<sup>3</sup>

The "international" dimension of monetary policy is thus easy to motivate. This paper discusses key aspects of the international coordination of monetary policy, with particular emphasis on the role that exchange rate considerations should play in the larger industrial countries. The next section seeks to clarify the concepts of coordination and autonomy; then we consider the objectives of the monetary authorities, and follow that by explaining why we regard benign neglect, coordination around rigidly fixed exchange rates, and restrictions on international capital flows all as flawed corner solutions. Then we assess the search for additional policy instruments, including sterilized official intervention, fiscal policy, and structural policies (aimed at greater wage-price flexibility). In the subsequent section, we turn to what we regard as more promising policy strategies, at least for the long term. Key elements of such strategies include focusing monetary policy on price stability (or another domestic nominal magnitude) in the largest economies; using monetary, fiscal and structural policies to correct "bad" external imbalances at their source;

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<sup>1</sup> Rasche (1987).

<sup>2</sup> Tanzi (1988) provides a discussion of the lags associated with implementing fiscal policy adjustments in the major industrial countries.

<sup>3</sup> Delors (1989).

and specifying exchange rate commitments that are looser and **quieter**<sup>4</sup> across currency areas than within them. That section also contains a discussion of the role of the International Monetary Fund in the coordination process. Finally, we briefly survey existing model evidence on competing policy options and provide some additional simulations using a global macroeconomic model (MULTIMOD).

### **Coordination and autonomy: clarifying basic concepts**

The late Henry Wallich (1984, p. 85) defined coordination as “ . . . a significant modification of national policies in recognition of international economic interdependence.” Such a concept of coordination encompasses—but also goes beyond—the adoption of a common data base and the exchange of information regarding recent developments and policy intentions. Some writers prefer to reserve the term “coordination” for agreements among countries to adjust policies in light of shared objectives and/or to implement policies jointly; less ambitious forms of interaction are often then labelled as economic “cooperation.”<sup>5</sup> By analogy, policy autonomy implies greater independence by each country in pursuit of its objectives. Almost whatever the definition chosen, international policy coordination has been stronger in the four years beginning with the Plaza Agreement of September 1985 than during the first dozen or so years of managed floating (1973-85).

In our view, neither coordination nor autonomy ought to be regarded as objectives in themselves; instead, they are better seen as facilitating mechanisms for obtaining better policy performance. Coordination is basically a mechanism for internalizing the externalities that arise when policy actions of some countries, particularly the larger ones, create quantitatively significant spillover effects for other countries.<sup>6</sup> Autonomy, in contrast, relies on independent decentralized policy decisions at the national level to achieve policy objectives.

From this perspective, it follows that coordination and autonomy are both capable of producing good and bad outcomes depending on

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<sup>4</sup> That is, not disclosed. See Frenkel and Goldstein (1986).

<sup>5</sup> Dini (1988), Horne and Masson (1988), Tietmeyer (1988).

<sup>6</sup> Frenkel, Goldstein, and Masson (1988a, 1988b).

how such mechanisms are applied in practice. Postwar experience highlights the point.<sup>7</sup> During most of its first two decades of operation, the Bretton Woods system of coordination acted as a force for stability in the world **economy**.<sup>8</sup> Under the "implicit contract," the United States as the center of the system accepted the obligation to conduct its macroeconomic policies in a prudent, stable way; it was also passive about its exchange rate as a solution to the "N-1 problem." As a consequence of their exchange rate obligations, other countries gave up independence in their monetary policies; in exchange, they received implicit assurance that they would be importing price stability. The move to floating rates in early 1973 was, in good measure, a response to the breakdown of that implicit coordination contract. Specifically, **Germany** and Switzerland saw floating and more autonomy as a way to break out of the vicious circle of disequilibrium exchange rates, heavy exchange market intervention, and **massive** capital inflows—and thereby regain control of their money **supplies**.<sup>9</sup> But autonomy gained is by no means always autonomy wisely used. Summarizing the 1973-84 experience of the industrial countries with managed floating, G-10 Deputies concluded that ". . . the (present) system has not adequately promoted sound and consistent policies."<sup>10</sup>

The **coordination/autonomy** debate is logically distinct from the other longstanding policy debate on rules versus discretion. We say this because it is possible to envisage **both** coordination and autonomy as being implemented under either a rules or discretion format. **Kenen**

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<sup>7</sup> The theoretical literature likewise offers cases where coordination can generate good and bad outcomes. Whereas any single country acting alone may be reluctant to expand when faced with a global deflationary shock for fear of unduly worsening its external balance, coordinated expansion can loosen the external constraint and can permit each country to get closer to internal balance. On the other hand, if inflation-prone authorities are restrained by the concern that unilateral monetary expansion will bring on a devaluation, a coordinated expansion will weaken discipline by removing that threat; see Rogoff (1985).

<sup>8</sup> Solomon (1982).

<sup>9</sup> Emminger (1977, p.4) has stated: "For countries like **Germany** and Switzerland, the main—or even only—reason why they went over to floating in the spring of 1973 was the necessity to regain control over their own money supply." Suzuki (1989, p. 2) has recently offered a similar view: ". . . after the adoption of the floating rate system, the Bank of Japan was able to control money supply more effectively and, as a consequence, the growth rate of real GNP and the rate of inflation became more stable."

<sup>10</sup> This 1985 G-10 Deputies Report is reproduced in Crockett and Goldstein (1987).

(1987), for one, has argued for a rules-based approach to policy coordination along the lines of Bretton Woods because it economizes on the scarce resource of willingness-to-coordinate. On the other side, there is the formidable difficulty of identifying coordination rules that are robust to changes in the operating environment." For example, by placing all exchange rate changes under international supervision, the Bretton Woods rules of the game achieved their purpose of minimizing competitive exchange depreciations (a la 1930s); but these same rules became a liability in the late 1960s and early 1970s when the need arose for greater exchange rate flexibility. The dialogue in the domestic monetary policy context has had similar overtones, with adherents of rules stressing the long-term advantages of predictable policies and of constraints on unknowing or expansionist policy authorities, and with champions of discretion citing the need for flexibility to deal with both short-term disturbances and longer-term structural changes.<sup>12</sup> Thus far, practice on both the international and domestic fronts has come closer to the discretion pole. Successive G-7 coordination agreements have featured country-specific policy commitments and concerted official views on the pattern of exchange rates but have not specified a new set of rules for the system. By the same token, monetary authorities in several major industrial countries have continued to announce and to pay attention to monetary aggregates but have moved closer to an "eclectic" approach.

### **Objectives of monetary policy**

The goals or objectives of monetary policy are often stated as price stability, full employment, and sustainable economic growth. Such a listing, however, obscures an important shift in priorities and in approach to policymaking as between the 1980s and the two previous decades. As documented by Polak (1988), control of inflation has been elevated above avoiding more-than-frictional unemployment, and real output targeting has given way to targeting nominal

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<sup>11</sup> Goldstein (1984).

<sup>12</sup> Changes in velocity have heightened interest in "adaptable" rules or guidelines that use longer-term trends in velocity, as well as potential rather than actual output; see Hallman and others (1989).

**Table 1**  
**Balance of Payments on Current Account, 1980-88<sup>1</sup>**

	1980	1981	1982	1983	1984	1985	1986	1987	1988
Balance on current account									
(In billions of U.S. dollars)									
United States	1.53	8.16	-6.99	-44.29	-104.19	-112.69	-133.25	-143.70	-126.55
Japan	-10.75	4.77	6.85	20.80	35.00	49.17	85.85	87.02	79.63
Germany, Fed. Rep. of	-13.85	-3.57	5.12	5.31	9.85	16.55	39.38	45.24	48.61
(In percent of GNP)									
United States	0.06	0.27	-0.22	-1.30	-2.76	-2.81	-3.14	-3.17	-2.60
Japan	-1.01	0.41	0.63	1.76	2.78	3.67	4.34	3.63	2.78
Germany, Fed. Rep. of	-1.69	-0.52	0.78	0.81	1.58	2.62	4.38	4.02	4.02

Source: *World Economic Outlook*

<sup>1</sup> Including official transfers.

variables.<sup>13</sup> While controversy exists on which intermediate target (for example, the monetary aggregates, nominal domestic demand, interest rates, the exchange rate, various price indexes, or some combination) will produce the best result under a variety of disturbances, the bottom line is that price stability is now widely regarded as the principal priority for monetary policy.<sup>14</sup> Suffice to say that given the experience of the late 1960s and the 1970s, we regard this reorientation of monetary policy as entirely warranted.

The issue of what monetary policy should do about current account and exchange rate developments<sup>15</sup> has, of course, been the subject of increased concern in light of the huge imbalances recorded since 1984 by the United States, Germany, and Japan, and of the large swings—and sometimes, “**misalignment**”—of the U.S. dollar throughout the decade;<sup>16</sup> see Table 1 and Chart 1, respectively. Here, a more differentiated approach is called for.

We **reject both** the “all current account imbalances should be eliminated” view and the “**current** accounts don't matter” view. Non-zero current account positions arise from a variety of sources, some of which are “good” and require no policy intervention, and some of which are “**bad**” and do require intervention. This distinction can best be illustrated by recalling the identity that expresses the current account as equal to the sum of the saving-investment balances of both the public and private sectors. In this context, it is not difficult to

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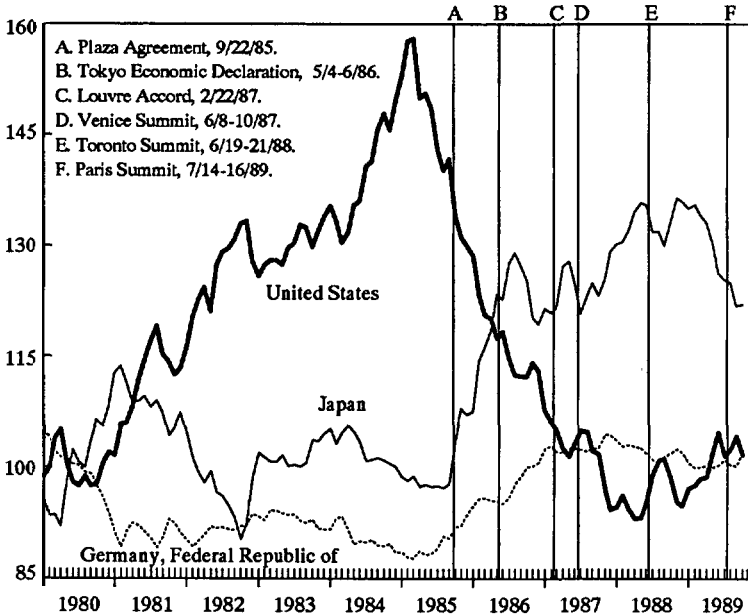
<sup>13</sup> While authorities **often** continue to provide price and quantity components of nominal GNP, these are typically regarded as “assumptions” or forecasts rather than “targets.”

<sup>14</sup> One attractive interpretation of such an ordering of priorities is that price stability is a necessary (albeit not sufficient) condition for the achievement of other objectives. Greenspan (1987), for example, has argued that “. . . the mandate for economic policy in the United States and elsewhere should be to maintain the maximum growth in real income and output that is feasible over the long run. A necessary condition for accomplishing that important objective is a stable price level, the responsibility for which has traditionally been assigned, in large part, to the central bank . . .”

<sup>15</sup> Current accounts and exchange rates are best viewed as intermediate targets in the sense that departures from targets can imply unfavorable feedback effects on the ultimate objectives of monetary policy (price stability, economic growth, and so forth).

<sup>16</sup> By “misalignment” we mean a departure of the real exchange rate from its equilibrium value. Williamson (1985) has estimated that as of the end of 1984, the dollar was overvalued by 39 percent and the yen undervalued by 19 percent.

**Chart 1**  
**Real Effective Exchange Rates, 1980 - 1989\***  
 (1980 = 100)



\* Real effective exchange rates based on normalized unit labor costs in manufacturing.

envisage several kinds of benign imbalances.<sup>17</sup> One is an imbalance that arises from reversible, intercountry differences in the age distribution of the population. Such demographic differences can be expected to yield different life-cycle-induced private savings patterns which, if not paralleled by differing domestic investment opportunities, will find their reflection in current account imbalances. Yet there is no presumption that these underlying private saving decisions are sub-optimal. Consumption-smoothing of a temporary terms-of-trade shock, and private investment booms that make investment in one country more productive than elsewhere, are other examples of good imbalances. In such cases, international capital markets are playing

<sup>17</sup> Dornbusch (1988) provides a more complete catalogue and analysis of alternative types of "good" and "bad" imbalances. The same logic separating "good" from "bad" imbalances can be used, as in Frenkel (1985), to assess the relative merits of fixed and flexible exchange rate regimes.



their intended function of optimally allocating saving. Contrast this with the situation where the government is borrowing abroad primarily to finance a consumption spree and where, therefore, an *unsustainable* net liability position is being **established**.<sup>18</sup> When it comes time to pay the piper, there will need to be adjustments—probably sharp ones—to absorption and to relative prices that are likely to be costly to the country and to its trading partners.<sup>19</sup> Here, the current account imbalance obviously "matters" and there is a strong case for removing the imbalance at the *source* by reducing government borrowing **and/or** spending.<sup>20</sup> Other examples of "bad" imbalances are those arising from tax considerations that distort pretax real rates of return, or from "market failures" of various sorts (including ones where the present generation in its saving decisions takes too little account of the interests of future generations, or where private saving and investment decisions are made on the basis of market prices that do not reflect "fundamentals").

A strong implication is that one needs to know the *origin* of a current account imbalance before one can decide both *if* it needs correction, and if so, *how* to correct it. This, in turn, **points** up the limitations of simple "assignment rules" that specify how monetary and fiscal policy should be assigned to internal and external balance<sup>21</sup>—be it on the basis of the size of respective impact multipliers from econometric or theoretical **models**,<sup>22</sup> or on the basis of the relative flexibility of the instruments. Since these assignment rules cannot distinguish the source of the disturbance to the current account, they

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<sup>18</sup> We abstract here from the issue of "Ricardian equivalence." If such equivalence holds, then the government's saving-investment imbalance will have no inter-temporal effects; in that case, the current account imbalance would still be "benign."

<sup>19</sup> The kind of adjustments necessary, and their growth and inflation implications, are often referred to as the "hard landing" scenario; see **Marris** (1987). See also **Lamfalussy** (1987).

<sup>20</sup> Another relevant factor, more political than economic, is that large and persistent current account imbalances—whatever their source—may incite protectionist pressures.

<sup>21</sup> A shortcoming of all such simple assignment rules is that they assume no coordination between monetary and fiscal authorities within a country. Once such coordination is admitted, monetary and fiscal policies can together pursue internal and external balance.

<sup>22</sup> The principle that a policy instrument should be assigned to the policy target on which it has the greatest effect is from **Mundell** (1960). **Boughton** (1988) and Genberg and Swoboda (1987) have used it to argue that, under floating rates, fiscal policy should be assigned to external balance and monetary policy to internal balance. This is the reverse of the more traditional assignment, as defended in Williamson and Miller (1987). Using a **Mundell-type** model, **Frenkel** (1986) shows that the appropriate assignment depends on the degree of capital mobility.

run the risk of barking up the wrong **tree**.<sup>23</sup> Suppose, for example, that there is a shock that increases the rate of return to investment and that, subsequently, the country runs a current account **deficit**.<sup>24</sup> Suppose further that monetary policy is assigned to maintaining current account balance. In that situation, tighter monetary policy could inappropriately choke off a sustainable investment-led increase in economic **growth**.<sup>25</sup> Take another example, this time where household saving is too high because of the existence of a favorable tax incentive, and where fiscal policy is assigned to external balance. In this situation, the policy response to a current account surplus may be an increase in government expenditures that entirely misses the root cause of the problem. There **will**, of course, be situations where either it is difficult to identify the source of the imbalance, or where the imbalance cannot be corrected at the source. One then enters the slippery world of the second best where a choice has to be made either to leave the imbalance alone or to make compensating adjustments at other than the source of the problem. Such situations are best handled on a case-by-case basis.

Lest there be any misunderstanding, we do *not* see benign influences as dominant in the large existing current account imbalances for the three largest industrial countries. In particular, while there are demographic and other structural factors involved, we regard the U.S. current account deficit as a "bad" deficit that should be reduced substantially, primarily through fiscal consolidation. We simply note that despite large net capital inflows, U.S. investment as a ratio to GNP is at a historically low **level**;<sup>26</sup> that even at this low investment ratio, investment still exceeds U.S. national saving by roughly 3 percent of GNP; and that this fall in national saving reflects both larger government deficits and lower private **saving**.<sup>27</sup>

<sup>23</sup> The problem is analogous to that encountered in trying to choose between interest rate and money-aggregate targeting, or between fixed and flexible exchange rates, on the basis of the dominant source of disturbances; see, for example, **Poole (1970)**, **Frenkel and Aizenman (1982)**, and **Aizenman and Frenkel (1985)**.

<sup>24</sup> The investment shock could, for example, take the form of a discovery of a natural resource, or technological advances that increase the productivity of capital in that country.

<sup>25</sup> Implicit here is the assumption that the country is earning a rate of return that exceeds the rate of interest paid on borrowed funds.

<sup>26</sup> See **IMF (1989)**, Supplementary Note 2.

<sup>27</sup> See **Bosworth (1989)** and **Feldstein (1989b)**.

So much for current accounts. We turn next to the role that exchange rate stability should **play in** the design of monetary policy—an issue that will be occupying us for much of the remainder of this paper. At this point, it is enough to make two distinctions.

One is between countries with and without strong *anti-inflationary* credibility. For the former group, there can be a good justification for pegging to the currency of a country with an established reputation for price stability as a means of disciplining both the authorities and the private sector. If credibility can be so established, it will induce changes in the structure of the economy, including in the elasticity of capital flows and in the wage-price determination **process**.<sup>28</sup>

In this situation, exchange stability is not in conflict with the objective of price stability; in fact, it becomes the *means* by which the low-credibility country establishes a nominal anchor to achieve price stability. Credibility for such a "hard currency" policy is not likely to be achieved costlessly or instantaneously. For example, if a change in the real exchange rate is needed, it must be achieved by a reduction of costs and prices in the low credibility country. Where there are labor market rigidities, this will involve output losses and higher unemployment. Yet the credibility of the authorities and of the exchange rate commitment depends on convincing the private sector that the authorities are willing to bear those costs. Still, when all is said and done, the costs of disinflation could well be lower than with alternative strategies.<sup>29</sup>

A classic illustration of this monetary policy strategy is provided by the EMS experience of the early 1980s. Since disinflation was then the top priority in virtually all EMS countries and since Germany had the best reputation for price stability, there was a commonality of interests in trying to converge to the German inflation rate. Monetary policy in Germany thus served as the anchor of the system. While to date there have been 11 realignments (since the beginning of the EMS in 1979), none of them has resulted in a revaluation relative to the deutsche mark, thus leaving Germany's reputa-

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<sup>28</sup> See Kremers (1989).

<sup>29</sup> In this connection, the relevant comparison is not just the difference in inflation behavior since 1979 between, say EMS and non-EMS countries (for example, see Collins [1987]), but also what have been the *costs* of disinflation in countries with and without a hard currency policy (for example, see Giavazzi and Giovannini [1988b]).

tion as an exporter of credibility intact; also these realignments have usually not provided full compensation for past inflation differentials—so that the resulting real appreciation for higher inflation countries acts as disincentive to inflation.

As Poehl (1987, p. 8) has put it succinctly, “. . . credibility is the capital stock of any central bank.” When a central bank doesn't have it, there can be advantages in tying its hands. Paradoxically, what looks like less autonomy in monetary policy can, in reality, be more. This is also relevant to discussions about a European central bank. If to convince the markets of the credibility of a hard currency policy, weaker-currency countries have to follow every interest rate change of the stronger-currency country, the former may actually increase their effective degree of autonomy within a central institution where they have some influence on the stance of a common monetary policy.

The second distinction worth emphasizing is between well-behaved and *misbehaved foreign* exchange markets. Here, the focus shifts from using exchange rate objectives to discipline policies to using them to discipline markets.

Recall that early advocates of floating exchange rates assumed that speculation would be stabilizing. Faith in that proposition has been weakened somewhat by the development of models of profitable destabilizing speculation,<sup>30</sup> by studies showing that most activity in foreign exchange markets represents interbank trading at short maturities,<sup>31</sup> and most of all, by episodes of exchange rate movements that seem to be unrelated—or even counter—to “*fundamentals*.”<sup>32</sup>

The failure of stabilizing speculation to live up to its advance billing makes it imprudent to adopt a strict “hands off” approach to foreign exchange markets—particularly since the real exchange rate is such a key relative price for resource allocation in advanced market economies. At the same time, we think it has yet to be demonstrated that speculative excesses and serious misalignments are the rule rather than the exception, or that improved macroeconomic policy perfor-

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<sup>30</sup> The literature on rational “speculative bubbles” and on “noise trading” is relevant; see Blanchard (1979) and Frankel and Froot (1987).

<sup>31</sup> See Dornbusch and Frankel (1987).

<sup>32</sup> Solomon (1988) singles out the late 1984 to February 1985 and early 1989 periods as ones where the U.S. dollar was moving counter to fundamentals.

mance would not favorably influence speculative behavior in these markets—without going all the way to continuous management of the exchange rate via monetary policy and publicly announced exchange rate **targets**.<sup>33</sup> To draw an analogy, it is one thing when handling flammable materials to exercise caution and to have a well-maintained sprinkler system in place to deal with accidents. It is another to have the water spraying down 24 hours a day.

## False corner solutions

Even if monetary authorities in the larger industrial countries were in perfect agreement about their objectives, they would still need to address *how* these objectives should be pursued. In this section, we analyze three alternative policy strategies and explain why we regard each of them as undesirable.

The first one is *independent pursuit of (monetary) policy* objectives, with benign neglect of the international repercussions of national policy decisions. There would presumably still be international cooperation via “. . . exchanging information about current and future policy decisions,” but little beyond that.<sup>34</sup> The underlying premise, like the working of the invisible hand under pure competition, is that a global optimum is best reached by independent, decentralized policy decisions. Our disenchantment with this strategy is based on four arguments.

First, this policy strategy pays too little attention to potential “beggar-thy-neighbor” practices. Unlike the atomistic agents of the competitive model, larger countries can exercise appreciable influence over prices, especially the real exchange rate.<sup>35</sup> As such, one cannot rule out manipulation of prices to their own advantage and at the expense of others.<sup>36</sup> Under floating rates, a mix of tight monetary

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<sup>33</sup> For an evaluation of the overall performance of foreign exchange markets in the post-Bretton Woods period, see Frenkel and Mussa (1980) and Frenkel (1981).

<sup>34</sup> Feldstein (1987).

<sup>35</sup> Cooper (1985, 1987), Fischer (1987).

<sup>36</sup> Tobin (1987, p. 68) expresses a similar sentiment: “. . . but in its (coordination) absence, I suspect nationalistic solutions will be sought—trade **barriers**, capital controls, and dual exchange rates. War among nations with these **weapons** is likely to be mutually destructive. Eventually, they, too, would evoke agitation for international coordination.”

and loose fiscal policy will produce an appreciated currency which enhances a country's own disinflation efforts—but at the expense of disinflation efforts of partner countries. Coordination is a way of discouraging such beggar-thy-neighbor practices.

Second, this option gives insufficient weight to a reasonable degree of (real) exchange rate stability as a public *good* that can be under-supplied if some large suppliers act in a decentralized way. One does not have to be an advocate of fixed rates to concede that decentralized policy decisions which induce large and unpredictable changes in real exchange rates create international external diseconomies for other policy authorities, as well as for private economic agents. Firms, for example, may hedge against such uncertainty by investing abroad across currency zones even if it means sacrificing cost and scale advantages associated with exporting from what would otherwise be the lowest cost *location*.<sup>37</sup> It is for this reason that even some supporters of largely decentralized policymaking see a need for some concession to coordination. **Corden** (1986, p. 431), for instance, concludes that, ". . . each country benefits the other by maintaining relatively stable policies which will minimize real exchange rate changes in either direction. Coordination consists: essentially of a reciprocal agreement to modify policies that generate real exchange rate instability."

Third, the benign neglect approach underestimates the contribution that coordination can make to achieving a country's *own* objectives—either by providing it with a counterweight to pressure from domestic pressure groups, or by restraining through peer pressure misguided policy actions of partner countries. On the latter count, we agree with Williamson's (1988, p. 4) assessment that ". . . prudence demands that a country retain the right to opt out . . . if the rest of the world is going off course. But it is better still to be part of a functioning system which gives some assurance that the rest of the world will *not* veer off course."

Finally, the benign neglect approach overestimates, we think, the effective degree of autonomy that exists in today's interdependent global economy. Not only have simple ratios of imports or exports to GNP increased from levels of the 1960s but capital markets have

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<sup>37</sup> Cooper (1988)

also become more integrated. Openness by itself places constraints on the conduct of monetary policy regardless of the exchange rate regime chosen.<sup>38</sup> The exchange rate regime influences the form that these constraints take.<sup>39</sup> Under fixed exchange rates and high international mobility of capital, authorities lose control over the money supply, that is, over the *instruments* of monetary policy. Flexible exchange rates permit control over the money supply but also imply more rapid adjustment of exchange rates and prices to money supply changes, as well as a sensitivity of current exchange rates to expectations of future policy action; this constrains the ability to influence some targets of monetary policy (for example, the level of real output).<sup>40</sup>

Nothing we have said contradicts the contribution that "putting one's own house in order" can make to greater exchange market stability. We question not whether this is a necessary **condition**—but rather whether it is a *sufficient* condition. Similarly, we do not see coordination as preventing countries from pursuing policies that "are in their own best interest" or as substituting for them; we instead argue that this "best interest" should take account of the spillover effects of domestic policy choices. To be sure, there are obstacles to coordination, ranging from intercountry differences of view about how the world works, to treatment of certain policy instruments as objectives in themselves. Some of these obstacles are also present in the domestic context, while others can, we think, be reduced over time.<sup>41</sup>

A second policy strategy could be *coordination around a set of fixed* (or adjustable) *exchange rates*, that is, bringing back Bretton Woods or expanding the EMS. Again, we do not see this strategy as fitting the bill—at least not for the larger industrial countries with good anti-inflationary credibility.

To begin with, such a fixed (nominal) rate strategy is unlikely to

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38 Duisenberg (1988, p. 40) offers an even stronger verdict: ". . . it is an illusion to think that, in the absence of an exchange rate objective, domestic policies would be free from constraints. In fact, the choice is to accept the policy constraints beforehand or to face the more damaging consequences when they are ultimately enforced by the market."

39 Frenkel and Mussa (1981).

40 Frenkel (1983) and Feldstein (1989a).

41 These obstacles to coordination are discussed more fully in Frenkel, Goldstein and Masson (1988a).

produce enough flexibility in real exchange rates to accommodate typical changes in real economic conditions, including permanent changes in the terms of trade, secular intercountry differences in rates of productivity growth, and long-term shifts in saving and investment **propensities**.<sup>42</sup> In theory, the required adjustment in real exchange rates could come just as well from adjustments in nominal wages and prices with fixed nominal exchange rates. But in practice the "stickiness" of nominal wages and prices makes it more realistic to get most of the job done by allowing the nominal exchange rate to **adjust**.<sup>43</sup>

Second, our ability to identify the equilibrium real exchange rate is subject to wide margins of error. In our paper presented at last year's Jackson Hole **symposium**,<sup>44</sup> we outlined the limitations of traditional approaches to estimating equilibrium rates (ranging from purchasing-power-parity to the underlying-balance approach). This argues for eschewing narrow exchange rate bands and for challenging the market only when differences between official estimates of the equilibrium rate and the market rate are "large."

A third difficulty is that exchange rate targets are better for disciplining errant monetary policies than errant fiscal policies—yet the latter have often been the real culprits in recent adjustment problems. In fact, exchange rate targets can even send the wrong signal for fiscal **adjustment**;<sup>45</sup> for example, when fiscal expansion prompts the currency to appreciate toward the top of the band, it sends a signal for looser monetary policy, thereby inappropriately "monetizing" the deficit.<sup>46</sup>

A fourth shortcoming, hinted at earlier, is that rigid exchange rate targets would divert monetary policy too often from its primary

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<sup>42</sup> If exchange rates are fixed in nominal terms, they would also need to be adjusted periodically to compensate for inflation differentials.

<sup>43</sup> Frenkel and Mussa (1980).

<sup>44</sup> Frenkel and Goldstein (1988b).

<sup>45</sup> Frenkel and Goldstein (1988a).

<sup>46</sup> See Frenkel and Goldstein (1986). It is no coincidence that second generation target zone proposals (for example, Williamson and Miller [1987]) contain a fiscal policy rule, whereas first generation proposals spoke only of monetary policy. Note also that the Delors Report (1989) sees the need for binding cross-country rules that impose upper limits on budget deficits of individual countries and preclude access to direct central bank credit—and this in *addition* to closer monetary coordination and greater fixity of exchange rates.



responsibility of promoting internal balance. There will, of course, be periods when internal and external considerations point monetary policy in the same **direction**.<sup>47</sup> But when the two conflict, the internal target should almost always take precedence. As Schlesinger (1988, p. 32) has argued:

” . . . nor can it in the future become the central banks' main function, regardless of the prevailing circumstances, to **try** to implement **fixed** targets for exchange rate movements . . . Central banks' most important function . . . resides in the fact that they collectively bear the ultimate responsibility for the 'global . . . rate of inflation' and that each individual major central bank is responsible for the stability of the purchasing power of its own currency.”

We can see no close substitutes for monetary policy in carrying out this crucial domestic stabilization task.

Last but not least, the credibility of exchange rate targets hinges directly on the **commitment** of policy authorities to achieve **them**.<sup>48</sup> In this sense, it is questionable whether a firm anchor for exchange rate expectations can be established on the cheap. This commitment to exchange rate targets is not likely to be uniform across countries since some will have more at stake in maintaining stability **than** others. Specifically, incentives are apt to be greater for small, open economies than for large, more closed ones; for country groups that have strong bilateral trade patterns; and for country groups where exchange rate stability is part and parcel of larger integration objectives. In this connection, Giavazzi and Giovannini (1988b) note that because of the large share of intra-EC trade in total trade, EC countries have a stronger incentive to limit fluctuations of intra-EC exchange rates

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<sup>47</sup> Suzuki (1989) identifies the September 1985 to December 1986 period as one where there was no serious inconsistency between domestic objectives of Japanese monetary policy and international considerations; from the beginning of 1987, however, he does see a conflict.

<sup>48</sup> Mussa (1986, p. 203) puts it well: "This commitment does not necessarily entail specific rules for monetary and fiscal policy . . . but rather, a general commitment to do whatever is necessary (within limits) to sustain official parities."

than of exchange rates *vis-à-vis* non-EC currencies;<sup>49</sup> moreover, they point to the importance of stability of intra-EC exchange rates for the survival of the common agricultural policy.

Yet a third policy strategy would be to throw "sand in the wheels" of the international capital markets, by accepting restrictions or transactions taxes on *capital flows*. In brief, this strategy is based on the assessment that such restrictions would be less costly to the real side of the economy than either subordinating macroeconomic policies to exchange rate targets, or accepting the kinds of exchange rate fluctuations associated with greater policy *autonomy*.<sup>50</sup> Since we have expressed our lack of enthusiasm for such "sand-in-the-wheels" proposals on other *occasions*,<sup>51</sup> we simply note here four serious objections.

First, to be effective, these proposals require universal *implementation*.<sup>52</sup> Yet there is always an incentive for some country to capture more of the world's business by not imposing the tax. If only the geographic location of speculation changes—and not its volume or nature—little will be accomplished.

Second, too little is known about asset price behavior in markets with different levels of transactions taxes to be confident that it will penalize only bad speculators and socially unproductive capital flows—without affecting good *ones*.<sup>53</sup> For example, are asset price volatility and misalignments systematically lower in say, real estate markets (with high transactions costs) than in financial markets (with lower ones)? Are "bubbles" less prevalent in fine art and wine markets (again where transactions costs are relatively high) than in stock markets? If restrictions or taxes are not successful at separating productive from unproductive flows, we would be sacrificing some of the benefits of liberalization, including increased returns to savers,

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<sup>49</sup> While some smaller EC countries have openness ratios of 60-70 percent—and while even Germany, France, Italy, and the United Kingdom have ratios of 25-30 percent—the share of imports in GNP for the EC as a whole (in 1987) is only about 12 percent; the analogous figures for the United States and Japan are 10 and 11 percent, respectively. See Giavazzi and Giovannini (1988b).

<sup>50</sup> Tobin (1980).

<sup>51</sup> Frenkel and Goldstein (1988b).

<sup>52</sup> Another consideration is resources spent by speculators in finding a way around the regulations.

<sup>53</sup> Mussa (1989).

a lower cost of capital to firms, and better hedging instruments against a variety of risks.

Third, we worry that restrictions on capital flows—even if they affected bad flows more than good ones—could weaken support for “outward looking” policies more generally and possibly spread to other areas, including the foreign trade sector.

Fourth, once sand has been thrown in the wheels, it may be difficult to get out, as **rent-seeking** groups coalesce around the restrictions.

### Searching for additional policy instruments

When an economist hears of one policy instrument being asked to serve two masters, his (Tinbergenesque) instinct is to look for another instrument. In this section, we briefly appraise prospects for assisting monetary policy through foreign exchange market intervention, fiscal policy, and structural policies.

The appeal of *exchange market intervention* is that, if effective, it would allow authorities to influence the exchange rate while monetary policy was taking care of internal balance. The relevant concept in this context is sterilized **intervention**, that is, intervention which is not allowed to affect the monetary base (and thus amounts to an exchange of domestic for foreign bonds).

Sterilized intervention is posited to affect exchange rates through two channels. One is via portfolio effects. Specifically, by altering the relative outside supplies of (imperfectly substitutable) assets denominated in domestic and foreign currency, intervention changes the risk characteristics of the market portfolio and induces changes in exchange rates.<sup>54</sup> The second channel is the signalling effect. The line of argument here is that exchange rates reflect expectations of future macroeconomic policies, that monetary authorities have inside information on future monetary policy, and that they can credibly signal future monetary policy via intervention.<sup>55</sup> Intervention is said to be a good signalling device **because authorities** are “putting their money where their mouth is,” because (if sterilized) signals can be given without affecting the real economy, and because intervention

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<sup>54</sup> Branson and Henderson (1985).

<sup>55</sup> Mussa (1981) and Dominguez (1989).

can be deployed rapidly and around the clock.<sup>56</sup> This signalling effect is sometimes also argued to be more powerful when intervention is "concerted" (that is, undertaken by several countries simultaneously) because it eliminates the risk of authorities operating at cross-purposes.

The last official study on the subject, namely, the **Jurgensen Report (1983)**, did not offer much encouragement; it concluded that sterilized intervention was a relatively weak instrument of exchange rate policy, with limited effectiveness beyond the short run. Some have argued, however, that the post Plaza Agreement experience merits a reappraisal of that verdict. Even if the contribution of intervention plus jawboning to the depreciation of the dollar from September 1985 to February 1987 is regarded as little more than "kicking the ball down the hill," they see the subsequent relative stability of key exchange rates as *prima facie* evidence of intervention's **efficacy**.<sup>57</sup>

Obstfeld (1988) has recently completed an examination of the effectiveness of intervention over the 1985-87 period. His main conclusions can be summarized as follows. First, the dominant policy determinants of broad exchange rate movements of recent years have been monetary and fiscal actions, not sterilized intervention. Second, except possibly in 1987, the scale of intervention has been too small (relative to huge outstanding asset stocks) to have significant portfolio effects. Third, the signals sent by intervention have been effective only when they have been backed **up** by the prompt adjustment of monetary policies, or when other events (for example, unexpected trade balance developments) have coincidentally altered market sentiment. **Finally**, the most convincing intervention operations have been "concerted" ones. This last conclusion is **also** consistent with the results of the only existing empirical study that had access to daily intervention data for the 1985-87 period. Specifically, Dorniquez (1989) found that concerted intervention had a larger and **longer-term** influence on exchange rate expectations than did unilateral intervention.

From all this we conclude that while sterilized intervention may be helpful at times in calming disorderly foreign exchange markets or in signalling authorities' views about the appropriateness of market

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<sup>56</sup> Obstfeld (1988).

<sup>57</sup> Williamson (1989).

exchange rates, it is not likely by itself to be powerful enough to extricate an overburdened monetary policy from two-hat policy dilemmas. Within these limitations, one can probably maximize "the bang for a buck" by implementing intervention in a concerted, coordinated way.

Another popular candidate for the second policy instrument is *fiscal* policy. In some coordination schemes, it is assigned to maintaining internal balance (say, nominal domestic demand),<sup>58</sup> while in others, it is paired with external targets (the current **account**).<sup>59</sup> In defining an appropriate role for fiscal policy, consideration needs to be given to the following factors.

First, it is a fact of life that fiscal policy is significantly *less flexible* than monetary policy in virtually all major industrial countries. Contrast, for example, the frequency in the United States of meetings of the Federal Open Market Committee with the frequency of budget submissions to Congress. This means that under current institutional arrangements, it is not realistic to envisage fiscal policy as playing a short-term stabilization role—be it on either the domestic or external side.

Second, we think fiscal policy should be framed primarily within a medium-term perspective. An appropriate fiscal policy should be guided by considerations of long-term efficiency, resource allocation, income distribution, and economic growth—rather than by short-term considerations of demand management and fine tuning. The emphasis should be on establishing the right incentives for working, saving, and investing—with monetary policy carrying the bulk of the domestic stabilization load. The delays and difficulties associated with correcting the large U.S. federal budget deficit undercut the case for greater flexibility of fiscal policy. Instead, they make the case for greater medium-term fiscal discipline. Too often in the past have industrial countries accepted " . . . a permanent increase in the debt-to-GDP ratio in order to achieve short-term objectives . . . ;"<sup>60</sup> see Table 2. The priority should be to ensure that the aggregate stance of fiscal policy is subject to a long-run constraint that precludes

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<sup>58</sup> Williamson and Miller (1987).

<sup>59</sup> Genberg and Swoboda (1987) and Boughton (1988).

<sup>60</sup> Bruce and Purvis (1988, p. 29).

**Table 2**  
**Major Industrial Countries:**  
**Debt Outstanding at Central and General Government**  
**Levels, 1978-88<sup>1</sup>**

(In percent of GNP/GDP)<sup>2</sup>

	1978	1982	1986	1987	1988 <sup>3</sup>
Central government					
Gross Debt					
Canada	30	34	48	49	—
United States	35	38	52	54	55
Japan	31	47	59	61	59
France	15	17	24	24	26
Germany, Fed. Rep. of	14	19	21	22	22
Italy	57	63	86	90	94
United Kingdom	44	48	51	50	45
Net debt					
Canada	12	20	37	38	—
United States	22	25	37	38	38
Japan	3	12	14	10	8
France <sup>4</sup>	-1	0	11	13	14
Germany, Fed. Rep. of	—	—	—	—	—
Italy	35	48	72	77	81
United Kingdom	9	18	15	16	13
General government					
Gross debt					
Canada	59	64	82	82	—
United States	47	48	65	66	67
Japan	42	61	73	76	74
France	26	31	36	37	37
Germany, Fed. Rep. of	29	38	41	42	43
Italy	62	66	88	93	96
United Kingdom	58	58	56	54	49

Table 2 — Continued

	1978	1982	1986	1987	1988 <sup>3</sup>
Net debt					
Canada	12	17	37	38	—
United States	29	31	41	42	43
Japan	11	23	26	22	19
France <sup>4</sup>	—	4	12	13	14
Germany, Fed. Rep. of	7	19	19	20	21
Italy	47	51	77	81	85
United Kingdom	25	29	25	26	22

Source: Fund staff estimates based on the following national publications: United States: Board of Governors of the Federal Reserve System. *Flow of Funds Accounts, Financial Assets and Liabilities. Year-End, 1964-1987*, and *Federal Reserve' Bulletin* (various issues); Japan: Economic Planning Agency, Government of Japan, *Annual Report on National Accounts* (various issues); Federal Republic of Germany: *Monthly Report of the Deutsche Bundesbank* (May issue); Italy: *Relazione Annuale all'Assemblea Generale Ordinaria dei Partecipanti*, Banca d'Italia; Canada: *The Fiscal Plan*, Department of Finance (February 1989); France: Institut de Prtvisions Economiques et Financières pour le Dveloppement des Entreprises, *Revue de l'Ipecode*; United Kingdom, Central Statistical Office.

<sup>1</sup> Book value of debt outstanding at the end of the year.

<sup>2</sup> Canada, France, Italy, and the United Kingdom: in percent of GDP.

<sup>3</sup> Data for 1988 are preliminary.

<sup>4</sup> For 1985-88 data are estimated by adding the fiscal deficit to the corresponding stock of debt in the previous year.

excessive debt accumulation. Once such a constraint is firmly established, there may arise unusual situations that warrant a departure from longer-term objectives.. We would expect them to be few and far between. The existence of automatic stabilizers in the tax system'already provides some counter-cyclical element in fiscal policy without the need to go to constant fine tuning.

Fiscal policy is, by its very nature; a more *disaggregated* policy instrument than monetary policy. However inconvenient this is for us macroeconomists, there is increasing evidence that the effects of fiscal policy actions depend critically on how those actions are carried out.<sup>61</sup> Does a cut in the deficit take place through reductions

<sup>61</sup> Frenkel and Razin (1987).

in expenditures or increases in taxes? Do expenditure changes fall primarily on tradable goods or on nontradables? Do **tax** changes affect mainly investment or saving? Are taxes of the lump sum variety or specific? Does the country undertaking the fiscal action have a current account deficit or surplus? Are the fiscal measures permanent or transitory? It all matters.

To sum up, the way in which fiscal policy is managed will have an important influence on the environment in which monetary policy must operate in pursuit of its objectives. By promoting proper incentives for long-run resource allocation and by avoiding an excessive accumulation of debt, it can improve prospects for sustainable noninflationary growth and for exchange market stability. In some respects, it may even be able to compensate for certain constraints imposed on monetary policy. For example, as increasing international capital mobility links real interest rates across countries, structural tax policies represent a way of altering the **mix** between consumption and investment at any given real interest **rate**.<sup>62</sup> But fiscal policy is not well suited for resolving short-term dilemma situations faced by monetary policy.

This is not the place to attempt an appraisal of the scope for structural policy changes in industrial **countries**.<sup>63</sup> That would constitute a paper in itself. There is, however, one element of structural **policy**—namely, measures to increase wage and price flexibility—that has a direct bearing on the task facing monetary authorities.

As suggested earlier, some industrial countries will have an incentive to give greater weight to exchange rate targets in the design of monetary policy than will others. For those who do opt for greater exchange rate fixity, domestic wages and prices have to carry more of the burden of responding to changes in supply or demand conditions. Indeed, in a common currency area, all of the adjustment in real exchange rates has to occur via inflation differentials. Other things equal, the lower the flexibility of wages and prices, the greater will be the output and employment losses associated with unfavorable real economic shocks. It is in this context that structural policies which increase the flexibility of the economy can make an important **con-**

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<sup>62</sup> Feldstein (1988).

<sup>63</sup> Structural policies include those that raise the productive capacity of the economy and those that increase its flexibility.



tribution. These would include trade policies that enhance competition, goods markets deregulation, and labor market reforms. Among the latter, measures that reduce barriers to occupational and regional mobility and that lower the social charges associated with hiring new workers, or in shifting them between sectors, are apt to be particularly helpful. **Mundell (1957)** singled out labor mobility as a key criterion for an optimal currency area more than 30 years ago. It is just as relevant today.

Even in those industrial countries that are willing to rely more on nominal exchange rate flexibility to achieve needed adjustments in real exchange rates, structural policies have a role to play in seeing that nominal exchange rate changes get "passed through" to relative traded goods prices. Policies that, for example, reduce nontariff barriers to imports and increase competition in the trade and distribution network, can increase the effectiveness of exchange rate changes and thereby decrease the size of the exchange rate change needed to obtain a given alteration in competitiveness.

A positive development of the 1980s has been the increasing awareness of the supply-side implications of structural policies.<sup>64</sup> These structural policies should be viewed as complements—rather than as substitutes—for appropriate macroeconomic policies. They should provide a stable framework in which monetary and exchange rate policies can operate with greater effectiveness in achieving their ultimate objectives.

## **Toward more promising policy strategies**

Identifying policy strategies that are not likely to work is one thing. Finding strategies that will is another. In this section we discuss some broad guidelines for the conduct of economic policy in today's interdependent global economy. These should not be confused with proposals. For one thing, several of our suggestions are already present in the ongoing policy coordination process, while others are feasible only over the long term. Thus, rather than advancing a com-

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<sup>64</sup> Gyohten (1988) sees the *G-7* coordination process as now in a third stage where the emphasis is on structural measures; in contrast, he characterizes the first and second stages as **emphasizing** exchange rate **realignment** and macroeconomic policies, respectively.

prehensive proposal for reform of the international monetary system, our aim is simply to stimulate discussion.

We begin with the notion that any successful exchange rate system needs some mechanism for avoiding both global inflation and global deflation. In our view, the responsibility for establishing a *nominal anchor* falls to the largest industrial countries. Specifically, monetary policy in these countries should be directed toward price stability so as to maximize prospects for sustainable noninflationary growth. Fiscal policy can assist in establishing a nominal anchor by forgoing excessive debt accumulation that itself would handicap the ability of the monetary authorities to carry out their task.

A relevant question is whether maintenance of such a nominal anchor requires something beyond the existing commitments of domestic monetary authorities. In this connection, it has been proposed that monetary policy in the larger industrial countries might target a common basket, such as the prices of a group of primary commodities. As noted by its proponents, such a basket has a number of potential *advantages*:<sup>65</sup> (1) commodities are traded daily in auction markets so that the price index can be calculated almost continuously; (2) the index has relevance for many countries since most commodities are produced, consumed, and traded on a worldwide basis; and (3) internationally traded commodities are relatively standardized, minimizing both quality measurement problems and systematic productivity biases as between tradables and nontradables. The problem, however, is that stabilizing such a commodity price index would not likely stabilize the broad price index of goods and services since there will be changes in the commodity terms of *trade*—a shortcoming that it shares with all partial *baskets*.<sup>66</sup> In fact, it is precisely because of such changes in the terms of trade that we see such commodity baskets as a possible "indicator" or early warning signal—rather than as a target—for monetary *policy*,<sup>67</sup> and as one among many indicators at that.

On a broader level, we see little to suggest that more explicit international anchoring rules have consistently produced better inflation performance. Cooper (1982), for example, documents large,

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<sup>65</sup> Heller (1987).

<sup>66</sup> Cooper (1988).

<sup>67</sup> Angell (1987) and Boughton and Branson (1988).

long-run swings in wholesale prices—on the order of 30-70 percent in both directions—during the nineteenth century gold standard. Similarly, Meltzer (1986) found that short-term prediction errors for prices were much higher during the gold standard than during the 1950-80 period.

We see this responsibility for price stability as a collective one of the largest industrial countries, rather than as the responsibility of any one country alone. In this sense, it is now more appropriate to speak of the "N-3" (or "N-5" or "N-7") countries, rather than the "N-1" countries for the system. This collective orientation, in turn, reflects the greater symmetry in economic influence among the major industrial countries that characterizes today's global economy vis-à-vis 20, or even 10, years ago; see Table 3. No longer is there

**Table 3**  
**Shares of Selected Countries in World Totals**

	United States	Japan	Fed. Rep. of Germany	Other
Share of National Currencies in Total Identified Official Reserve Holdings <sup>1</sup>				
1975	85.1	0.6	6.6	7.7
1987	67.1	7.0	14.7	11.2
Share of World Trade <sup>2</sup>				
1956	16.2	3.3	7.4	73.1
1987	14.1	8.0	11.0	66.9
Share of World Output <sup>3</sup>				
1962	41.5	4.4	6.7	47.4
1987	28.5	15.0	7.1	49.4

<sup>1</sup> IMF *Annual Report*, 1980 and 1988.

<sup>2</sup> Based on the sum of imports plus exports. IFS *Supplement on Trade Statistics*, Supplement Series No. 15, 1988.

<sup>3</sup> GDP at market prices. IFS *Supplement on Output Statistics*, Supplement Series No. 8, 1984, and IFS *Yearbook* 1987.

an obvious **hegemon** which combines a dominant position in international trade and finance, an unblemished record for price stability, and a willingness to assume the obligation of being the ‘‘N-1’’ country. Indeed, one way of characterizing the policy coordination process is as a pragmatic mechanism for dealing with shared leadership.

This trend toward greater symmetry also partly explains why exchange rates alone are not likely to serve as the nominal anchor for the system. Not all countries can simultaneously rely on a fixed (nominal) exchange rate to guide their monetary policies. At least one country has to set the inflation rate for the system as a whole. Collective agreement on real exchange rate targets is likewise not the answer to the nominal anchor problem since real rates are consistent with any inflation rate.<sup>68</sup>

What would be the role of coordination in such a system? There are at least two immediate functions (aside from policing **beggar-thy-neighbor** codes). One is to mobilize peer pressure to strengthen individual country commitments to their internal balance objectives. The second is to deal with potential ‘‘adding up’’ problems that arise when the joint outcome of individual country internal balance targets is global inflation or **deflation**.<sup>69</sup> Solomon (1988), for example, sees insufficient attention to such adding up problems as having contributed to the buildup of global inflationary pressures in 1972-73 and to the depth of the global recession in 1981-82.

Our second basic guideline is that exchange rate commitments should be tailored to the characteristics and circumstances of individual economies. Moreover, we interpret this guideline as suggesting that exchange rate commitments should be looser and quieter in the largest industrial countries than in smaller, more open economies—some of which may even eventually opt to join regional currency areas.

This is emphatically not a call for benign neglect of exchange rates. As pointed out earlier, we regard a reasonable degree of exchange rate stability for key currencies as a public good for the system. The issue is how that public good should be produced and in what amounts?

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<sup>68</sup> Adams and Gros (1987) provide a lucid analysis of the nominal anchor problem associated with real exchange rate targets.

<sup>69</sup> Such ‘‘adding up’’ problems also apply to the level of world interest rates, and to the aggregate monetary-fiscal policy mix. This has been termed ‘‘absolute coordination’’ (Currie, Holtham and Hughes-Hallett [1988]).

In seeking to promote exchange market stability, the larger industrial countries would assume a set of responsibilities. First and foremost, by setting the stance of monetary and fiscal policy on a stable, noninflationary course and by endeavoring to correct bad external imbalances at their source, they would provide a more stable focus for exchange rate **expectations**.<sup>70</sup> The issue is not whether misalignments on the order of 1983-85 can recur; it is whether they can recur when fiscal policy is better disciplined and when external imbalances are much smaller. While the counter-factual is unobservable, we think that more disciplined policies would go a long way toward more disciplined exchange markets. That is also why we regard the coordination of policies as the key element of the ongoing **G-7** coordination process. Second; authorities in these countries would regularly develop their own (quiet) estimates of equilibrium real exchange rates. As we indicated earlier, these estimates are likely to be subject to substantial margins of uncertainty. Nevertheless, unless one accepts the view that "the market rate is always the right rate," an independent evaluation is needed. Third, in those (it is hoped unusual) cases where there is a "large" difference between the market rate and the consensus official view of the equilibrium rate consistent with fundamentals, authorities would intervene. This intervention could take the form of a statement of official views on the desirable direction of exchange rate movements, of concerted, sterilized exchange market intervention, and—if necessary—of coordinated adjustments in monetary policies. The Plaza Agreement and its aftermath is a good case in point. Again, we emphasize that these are **contingent** responsibilities—contingent upon strong evidence of bubbles or large misalignments in exchange markets.

Although such exchange rate commitments on the part of the larger countries would be looser than in many target zone schemes, they would not necessarily be less effective. This is because the stabilizing effect of any official exchange rate commitment on expectations depends on its **credibility**. One can argue that a looser commitment wherein authorities "keep their powder dry" for large, clear-call misalignments and do not claim that the primary assignment of monetary policy is for external balance, will be more credible than

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<sup>70</sup> The likelihood that the 1990s will start with a significantly better inflation performance on the part of the largest countries than did the 1980s should itself be a positive factor.

a (nominally) tighter and louder commitment. In evaluating the credibility of a commitment, market participants are also apt to weigh the costs of exchange rate instability against the costs of reduced monetary control. We would submit that for the largest economies, the costs of reduced monetary control are perceived to be large enough to tip the balance in favor of exchange rates only when exchange markets are seriously misbehaved.<sup>71</sup>

Let us turn next to the rationale for tighter and louder exchange rate commitments—perhaps even eventually common currency areas—for the smaller, more open economies.

In the section on clarifying basic concepts, we outlined the attraction of "tying one's hands" on monetary policy for a central bank that does not have its own strong anti-inflationary **credibility**.<sup>72</sup> Such a hard currency policy is likely to be most beneficial and credible when there is a conservative central bank to anchor to, and when the effects of international cost competitiveness and of price arbitrage in tradable goods loom large in the economy. The conservative central bank ensures that the loss of monetary independence is compensated by imported price stability. Openness makes the output and employment costs of inflationary behavior hit home harder and faster. In this regard, we would note that each of the three "poles" (North America, Europe, and the Pacific) often mentioned as possible regional currency areas has at least one—in fact, usually more than one—strong central bank with a good reputation for price stability. Also, as previously mentioned, the smaller industrial and newly industrialized economies have relatively high openness ratios:

A second motivation for stabilizing the exchange rate is to minimize the adverse effects of exchange rate variability and uncertainty on the volume of trade **flows**.<sup>73</sup> The incentives to avoid such uncertainty

<sup>71</sup> Suzuki (1989, p. 6) seems to share this assessment when he concludes: "Although the degree of economic integration among European countries, the **United States** and Japan is much less than in the European **Community**, exchange rate **stability** is still desirable if it can be achieved at a small cost."

<sup>72</sup> Chouraqui (1988) also argues that the nominal exchange rate may be superior to monetary aggregates as a disciplining mechanism since it is an instantly observable market price, which if stabilized, will not be subject to the problems of interpretation which **often** arise with monetary targets.

<sup>73</sup> Mussa (1986) provides strong evidence that variability of real exchange rates is typically much greater under floating than under pegged rates. The second link between exchange rate **variability** and trade flows has proved much harder to document; see International Monetary Fund (1984), Gotur (1985).

should be higher for more open economies, and for those trade flows that account for a large percentage of a country's total trade. On this latter point, a rough calculation suggests that if exchange rates within each of three regional currency areas were truly fixed, approximately one-third of world (non-oil) trade would be conducted at fixed rates; see Table 4. Note also that if exchange rates were more closely tied together within regional currency areas, exchange rate variability across zones would presumably be of lesser concern (since the latter would affect a smaller share of world trade).

**Table 4**  
**Non-Fuel Merchandise Trade Matrix, 1985**

(In billions of U.S. Dollars)

	TO			
	United States and Canada	Japan and Asian NIEs	European Community	Other
<b>FROM</b>				
United States and Canada	(98.7)	43.3	48.4	78.6
Japan and Asian NIEs	117.1	(62.7)	37.7	78.8
European Community	66.8	22.4	(312.5)	185.1
Other	41.8	31.0	84.2	(98.5)

Source: United Nations data on exports. Figures in parentheses give trade within the regional grouping.

Stabilizing exchange rates within regions would also build upon existing regional integration efforts. These include the single market program and discussions of monetary union in Europe, the Canada-U.S. Free Trade Agreement in North America, and the sharp increase in intraregional trade and investment among Japan, the newly

industrialized economies, and other Asian countries.<sup>74</sup> Larger integration objectives can give exchange rate commitments enhanced credibility because authorities have more at stake in keeping them.

Despite these potential advantages, it would be a mistake to underestimate the obstacles that stand in the way of tighter exchange rate commitments—and even more so, of regional common currency areas—particularly over the short term. Four of them merit explicit mention. First, the pace of, and commitment to, increased regional integration clearly differ across poles. Europe—with its now 10 years of successful operation of the EMS, its plans for 1992, its agenda for increased monetary policy coordination, and its larger integration objectives—has gone way beyond where North America or the Pacific are, or where they may want to go. In a similar vein, the extent of intraregional trade is greater in Europe than in either North America or Asia; Asian countries, in particular, now conduct a substantial share of their trade with the United States (see Table 4). Second, greater fixity of exchange rates within regions leaves unanswered the question of how to respond to real shocks that impact more severely on some countries in the currency area than on others. This points up the importance of factor mobility, real wage flexibility, and a tax and fiscal transfer system that operates at the level of the exchange rate union. Each of these adjustment and financing mechanisms would need to be better developed. Third, in a system of currency areas characterized by two-tier exchange rate commitments, there needs to be some coordination of exchange rate policy across the two tiers; the problem of formulating a consistent dollar policy for the EMS as a whole is a case in point. Finally, care would need to be taken to ensure that regional currency areas adopted an outward-looking stance and contributed to better global allocation of resources. Some countries—particularly if they have their own strong anti-inflationary credibility—may, in fact, view these obstacles as prohibitive, and opt instead for other exchange arrangements.

At this stage no one can know with any confidence whether the system will evolve in a “tri-polar” direction. The outcome will depend as much on political developments as on economic ones. We do think,

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<sup>74</sup> Japan's trade with the rest of Asia has increased dramatically, from 18 percent of Japan's total imports and exports in 1976 to more than 25 percent in 1988IV-89I. Also, the Japanese manufacturing industry has increased sharply its offshore production in the region; see Maidment (1989).



however, that a successful exchange rate regime should recognize that the optimal degree of exchange rate flexibility is probably not the same across countries and that options for reducing exchange rate variability also include reducing the number of exchange rates, that is, creating single currency areas.

The final topic we take up in this section is the role of the International Monetary Fund in the coordination process. The Fund has, for some time now, been assisting the **G-7** exercise of policy **coordination**.<sup>75</sup> This is in addition to the Fund's own surveillance activities, including Article IV consultation discussions with individual member countries and the twice-yearly discussions by the Fund's Executive Board and the Interim Committee of the staffs *World Economic Outlook*.

The standard justification for having an international institution participate in policy coordination is that it **facilitates use** of a common data base and provides a source of impartial analysis for any dialogue on policy consistency. When the coordinating group is small, the international institution may also contribute a systemic perspective on proposed policy agreements, while still keeping the group small enough for administrative efficiency.

A fairly detailed description of the procedural framework underlying current coordination efforts can be found **elsewhere**.<sup>76</sup> We simply note here that the broad policy guidelines discussed earlier raise a host of thorny analytical issues. These include: how to check the consistency of large-country internal balance objectives; how to estimate the "adding up" effects of large-country monetary and fiscal policy stances; how to distinguish "good" from "bad" external imbalances; how to evaluate the relative costs of alternative ways of correcting bad imbalances; and how best to estimate equilibrium real exchange rates. In our view, a good start has been made on some of these problems, in part through the application of "economic indicators" and the analysis of alternative medium-term scenarios. Suffice to say that more remains to be done to strengthen the analytical foundation of

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<sup>75</sup> The Managing Director of the Fund began to participate in the surveillance discussions of the G-5 Ministers and Governors in 1982 following the Versailles Summit. A Fund staff representative began to participate in certain meetings of G-5 Deputies in 1986. The G-5 was extended to the G-7 in 1987.

<sup>76</sup> Crockett (1988).

policy coordination and that the Fund is committed to contributing to that effort.

### Model evidence

There is a burgeoning literature on the use of econometric models to evaluate questions of policy assignment and of international macroeconomic policy **coordination**.<sup>77</sup> This literature is relevant to our earlier discussion because it provides some empirical feel for the relative importance of factors that may lead authorities to prefer one policy strategy over another. At the risk of overestimating the consensus yet reached across different models and studies, a number of conclusions stand out.

Perhaps the main one is that policy rules that do better for some **kinds** of shocks tend to do worse for other **kinds**. We see that as supporting our argument that the first-best policy strategy is to make the policy response contingent upon the source of the shock. When this is not feasible, then the second-best is to assign policy instruments to targets on the basis of the relative variance of shocks hitting that economy.

A second message is that fixity of *nominal* exchange rates performs on balance less well than freely flexible exchange rates, at least for the three largest industrial **countries**<sup>78</sup> (although the results depend to some extent on how the **fixed-rate** anchor is modeled). A related **finding**—albeit a still hotly debated one—is that variability in exchange rates (due to speculative bubbles, fads, or changes in subjective risk perceptions) does not seem to be an important cause of variability in other macroeconomic **variables**.<sup>79</sup> Again, we find this evidence consistent with our case against rigid exchange rate commitments.

A third conclusion is that monetary policy is relatively ineffective in hitting narrow real exchange rate **targets**.<sup>80</sup> Not surprisingly, this points toward wide bands if the exchange rate is to be used as an intermediate target.

<sup>77</sup> See Bryant and others (1989), which includes model simulation results as well as a survey of other evidence.

<sup>78</sup> Taylor (1988).

<sup>79</sup> Taylor (1988) and Frenkel, Goldstein, and Masson (1988c). Miller, Weller, and Williamson (1988), however, dispute this.

<sup>80</sup> Frenkel, Goldstein and Masson (1988c).

Lesson number four is that an attempt to precisely target variables such as nominal income or real exchange rates risks throwing the economy into a dynamically unstable **pattern**.<sup>81</sup> Moreover, this risk appears to be quite sensitive to the choice of the target path for the real exchange **rate**.<sup>82</sup> We interpret this as favoring “**gross-tuning**” over “**fine-tuning**” and as emphasizing the importance of getting an accurate estimate of the equilibrium real exchange rate (if it is to be a policy target).

We would regard the evidence dealing with coordination rules that aim at two target variables as more tentative. Much of this literature has been focused on a comparison of assignment rules with the traditional assignment pairing monetary policy with external balance and fiscal policy to internal **balance**,<sup>83</sup> and with the “reversed assignment” preaching the **opposite**.<sup>84</sup> As indicated earlier, we have strong reservations about both these assignments since such rules pay insufficient attention to the source of the shocks. This being said, the simulation results thus far suggest that the traditional assignment outperforms the reversed **assignment**.<sup>85</sup> But these results may be misleading. Specifically, they assume that the requisite flexibility exists for fiscal policy. In the more likely case where government spending is subject to time lags and other constraints related to the political process, the reversed assignment sounds more sensible. In such a framework, fiscal policy might be adjusted to an external balance target, but only infrequently, in response to a clear signal that current account developments were unsustainable. In fact, once fiscal policy is assumed to be less flexible, the better simulation performance of the traditional assignment largely **disappears**.<sup>86</sup>

In the section on monetary policy objectives, we argued against orienting monetary policy exclusively toward domestic targets, without any weight given to external repercussions. At the same time, we argued for a selective and flexible response to both domestic and

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<sup>81</sup> McKibbin and Sachs (1988).

<sup>82</sup> *Ibid.*

<sup>83</sup> Williamson and Miller (1987).

<sup>84</sup> Genberg and Swoboda (1987) and Boughton (1988).

<sup>85</sup> Currie and Wren-Lewis (1988) and Frenkel, Goldstein and Masson (1988c).

<sup>86</sup> Frenkel, Goldstein, and Masson (1988c).

foreign shocks. We illustrate these key points below using simulations of a global macroeconomic model developed in the Fund, namely MULTIMOD. Given space limitations, the presentation has to be abbreviated, but one hopes it can still give a flavor of the main forces at work.

We compare the response of the U.S. economy to shocks to U.S. consumption or investment, and also to changes in the foreign demand for U.S. exports and for U.S. assets, under several different assignments of policy instruments to **targets**.<sup>87</sup>

The three policy rules that we consider are the following:

- (1) nominal GNP targeting using short-term interest rates (with no external objective),
- (2) assigning the short-term interest rate to a target for the real effective exchange rate, and government spending to nominal domestic demand; this is the "blueprint" of Williamson and Miller (1987),
- (3) assigning the monetary policy instrument to nominal GNP, and government spending to the current account balance; that is, the "reversed assignment."

Chart 2 compares the resulting paths for several macroeconomic variables, in response to a positive shock occurring in 1988 to consumption or to investment in the United States, and equal in each case to 1 percent of U.S. GNP.<sup>88</sup> In the short run, the GNP effects of the two shocks on impact are similar: they put pressure on supply

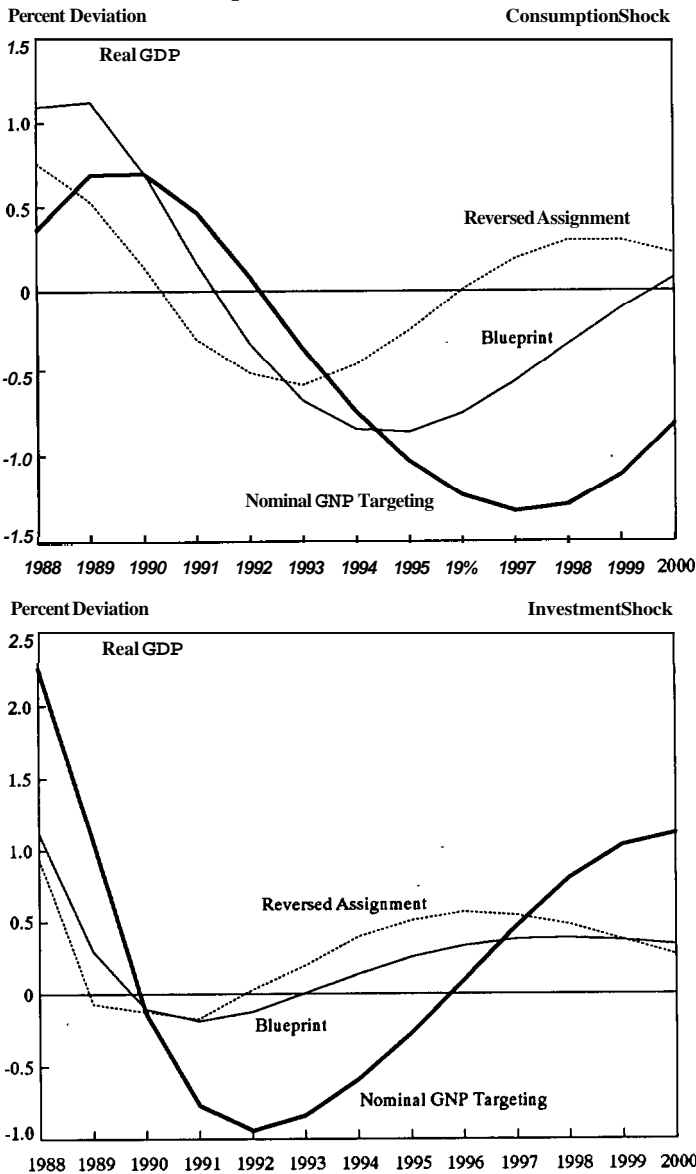
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<sup>87</sup> The model used is presented in Masson and others (1988), with the modifications described in Frenkel, Goldstein and Masson (1988c). The policy rules are implemented slightly differently than in that paper, however. The "blueprint" rule is assumed to use a linear feedback relationship of real exchange rates onto interest rates, rather than the cubic equation of the earlier paper which was found to give unsatisfactory results when the magnitude of exchange rate changes differed markedly between countries. The "reversed assignment" rule targets nominal GNP here, rather than nominal domestic demand as previously, in order to make it more comparable to the nominal GNP targeting rule. The latter two rules have a higher feedback coefficient of nominal GNP in the interest rate equation than previously, permitting a sharper differentiation of these two rules from the blueprint rule. Qualitatively, however, the conclusions of the earlier paper still obtain.

<sup>88</sup> The shock is a temporary one, but it has persistent effects because the residuals in the equations for consumption and investment exhibit autocorrelation, and because of dynamics related to asset stock accumulations and lagged adjustments.

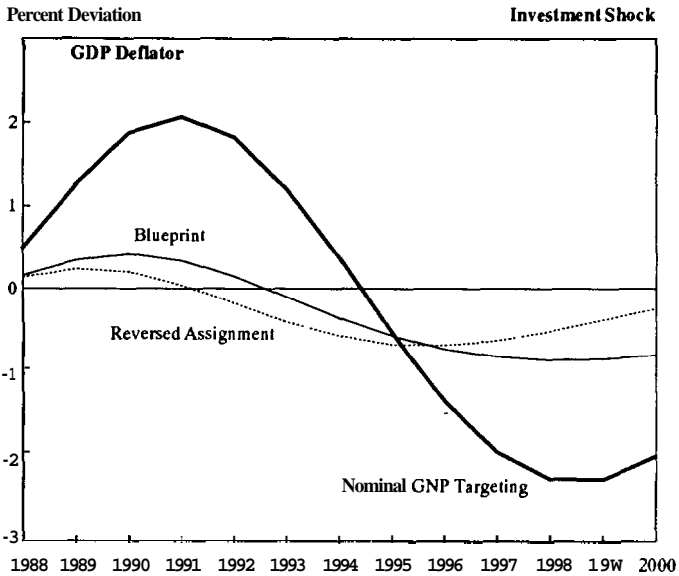
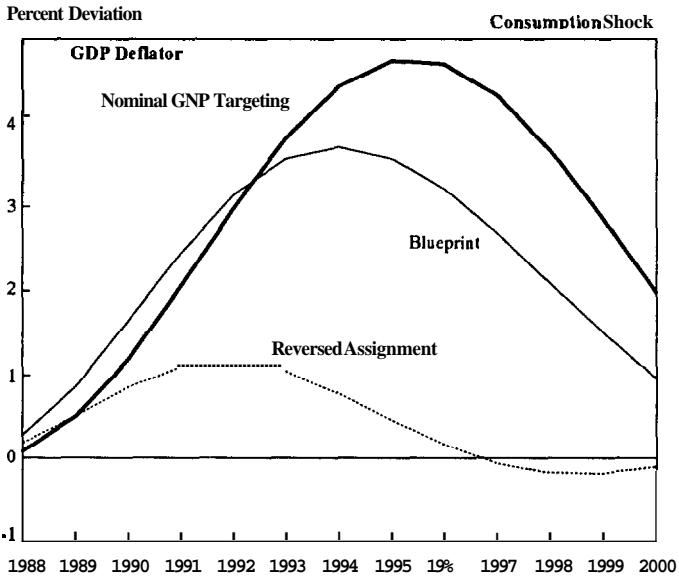
Chart 2

**Responses of U.S. Variables to Temporary Consumption and Investment Shocks**  
 (each equal to 1% of GNP in 1988)



### Chart 2 (continued)

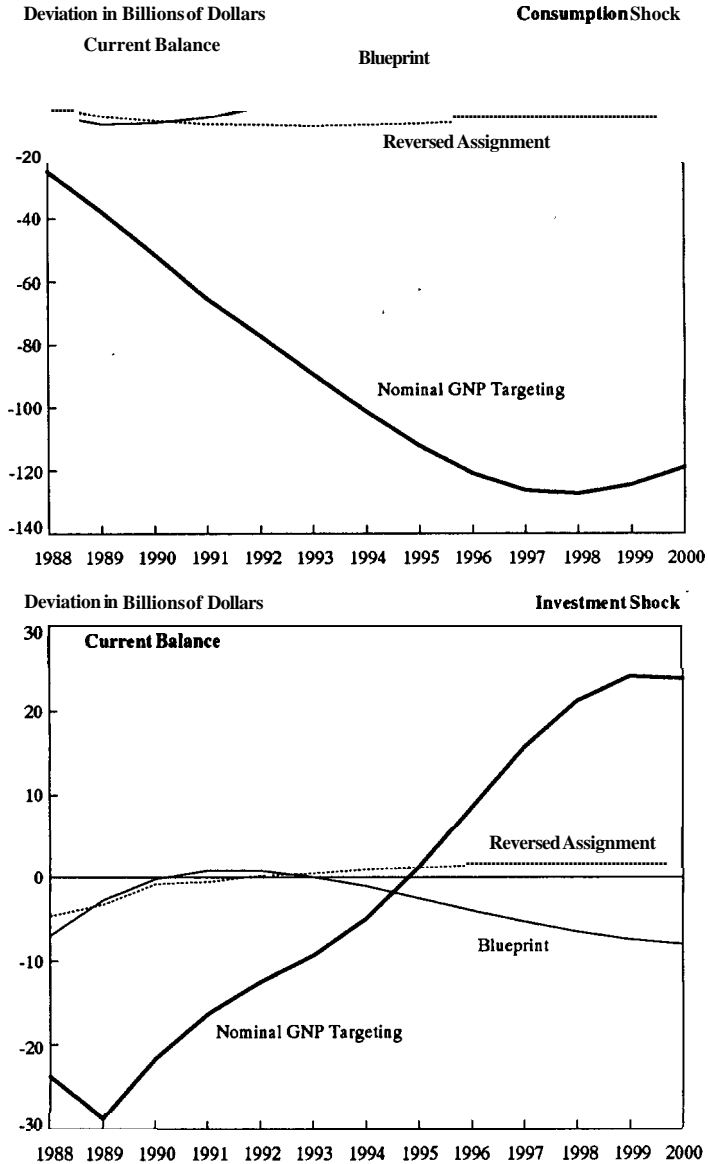
## Responses of U.S. Variables to Temporary Consumption and Investment Shocks (each equal to 1% of GNP in 1988)



### Chart 2 (continued)

## Responses of U.S. Variables to Temporary Consumption and Investment Shocks

(each equal to 1% of GNP in 1988)



and tend to force up prices. However, their medium-run implications are quite different. If consumption increases without an increase in aggregate supply, it may bring about a persistent current account deficit which is **unsustainable**.<sup>89</sup> In the case of an increase in investment, the aggregate demand increase will also be associated with an increase in aggregate supply. Starting from a balanced current account, the investment increase will initially be associated with a deficit, but if the investments are profitable, the subsequent increase in supply will later return the current account to balance. In the light of their different implications, the appropriate policy responses to the two types of shocks are also different. None of the rules considered here, however, is designed to distinguish between the two types of shocks.

Nominal **GNP** targeting tends to be slower to neutralize the consumption shock in the simulations. There are two related reasons. First, unlike the other rules, it must rely solely on monetary policy. Second, the strength of the feedback from nominal income to interest rates is limited by the danger of instrument instability; too strong a reaction would require a reversal as the lags in effects of monetary policy on real activity and prices worked themselves out, leading to a whipsaw movement in interest **rates**.<sup>90</sup> As a result, price level pressures build up, as does a trend deterioration in the current balance, which only tends to stabilize at the end of the simulation period.

The other two rules benefit from an extra instrument—government spending—and also respond to an external indicator—either the real exchange rate or the current balance—which gives useful information about subsequent effects on output and prices. The shock to consumption leads to large current account deficits, which are not automatically reversed. The reversed assignment rule, because it resists this trend movement through cutting government spending, is most successful in stabilizing output and prices; moreover, monetary policy leans against the increase in nominal income, and tightens

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<sup>89</sup> Whether the current account path is unsustainable depends on the initial external position, and also whether real interest rates exceed real growth rates. If the latter is true, then growth will not solve external imbalances; some adjustment in spending will eventually be necessary.

<sup>90</sup> The feedback coefficient was chosen in such a way as to give the closest control of the target, while not producing instrument instability.



moderately. In contrast, the blueprint assignment of monetary policy to the real exchange rate leads to some easing of monetary policy because the consumption shock (increasing the demand for U.S. goods) leads to some real appreciation of the dollar, which is resisted by lower interest rates. Thus, from the point of view of the domestic targets of price stability and income stabilization, monetary policy is moving in an inappropriate direction; this is offset to some extent by a tightening of fiscal policy in response to the increase in domestic demand.

The shock to U.S. investment, while giving rise to similar short-term effects (that is, stimulus to economic activity, a current account deficit, and exchange rate appreciation) has very different medium-term implications. The two rules that respond to external indicators tend to resist the investment boom to a greater extent than does nominal income targeting. As a result, they yield a lower level of output, a higher price level, and smaller current account surplus at the end of the simulation period. Here, unlike the case of the consumption shock, the hypothesized extra instrument (fiscal policy) does not necessarily lead to a better outcome.

The general lesson illustrated by these simulations is that the response to short-run deviations **from** macroeconomic targets should be conditioned on an assessment of the likely nature and medium-term implications of the underlying shocks. Chart 3 plots outcomes under the same three policy rules, this time when faced with shocks to two external variables. One is a shock to foreign portfolio preferences, which is assumed to lead to a shift out of dollar assets, causing a 5 percent depreciation on impact of the dollar against other industrial country **currencies**.<sup>91</sup> Such a shock can be interpreted as "misalignment" in the sense of Williamson and Miller (1987): the exchange rate change is not the result of a change in the equilibrium competitive position of the United States, nor of a **change** in the sustainable capital flows facing the United States.

The blueprint rule attempts to offset the shock by raising U.S. interest rates. It is broadly successful in insulating aggregate output and the price level (as well as the real exchange rate) in the medium

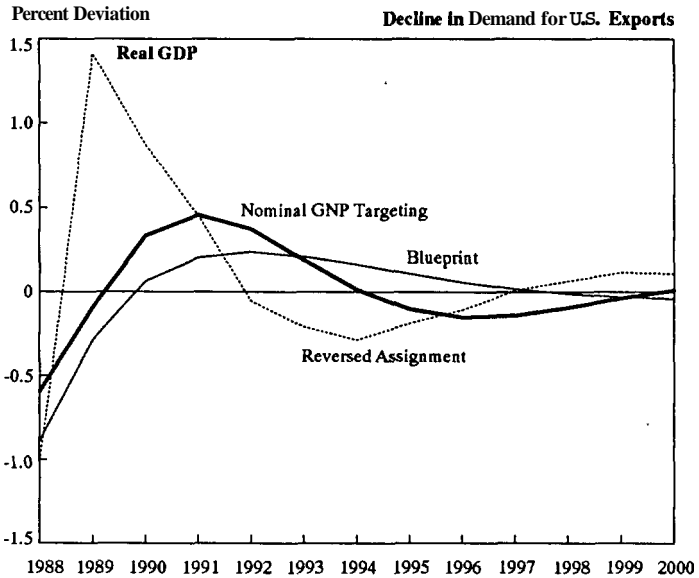
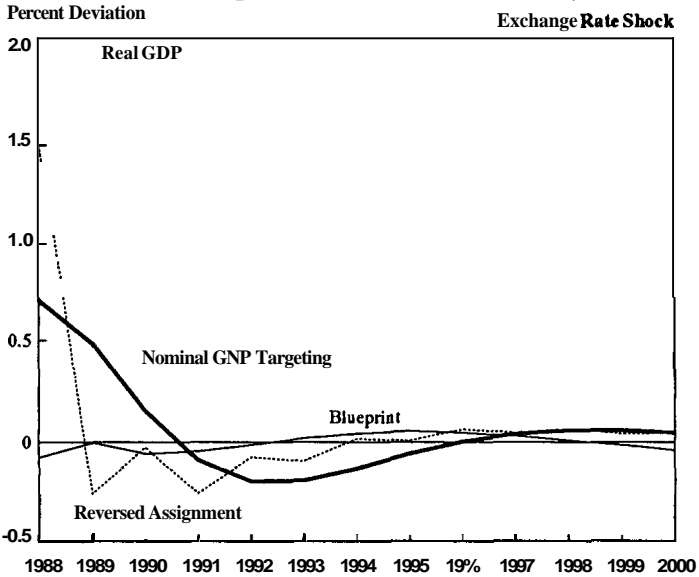
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<sup>91</sup> Thereafter, the risk premium is assumed to return to its baseline level, in accordance with an estimate based on historical data of the degree of persistence of these shocks.

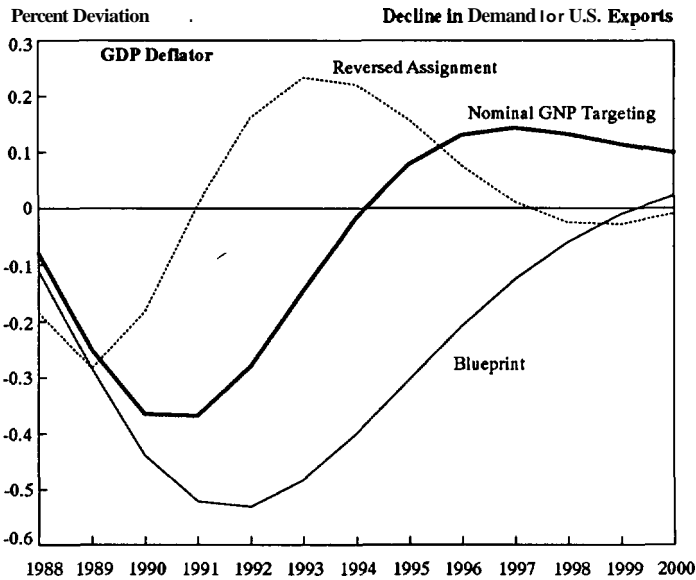
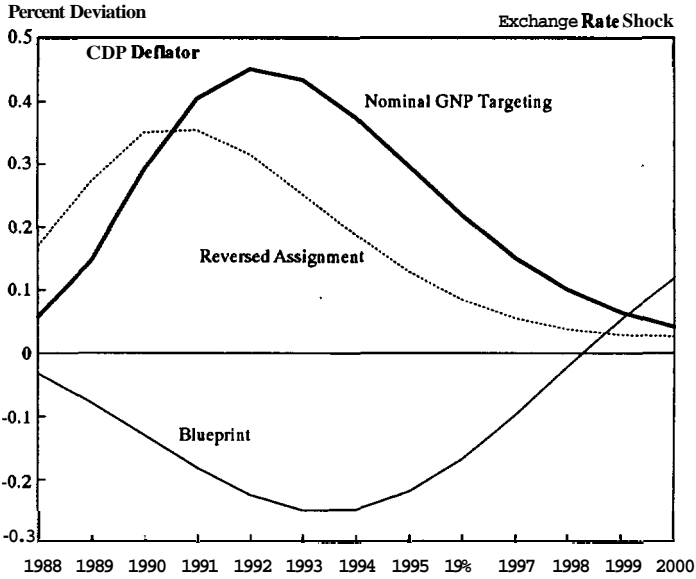
### Chart 3

## Responses of U.S. Variables to Temporary Foreign Shocks

(each equal to 1% of GNP in 1988)



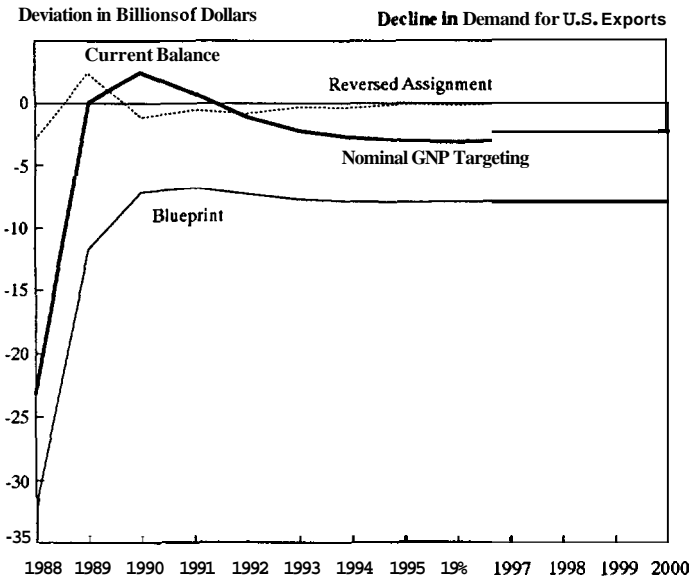
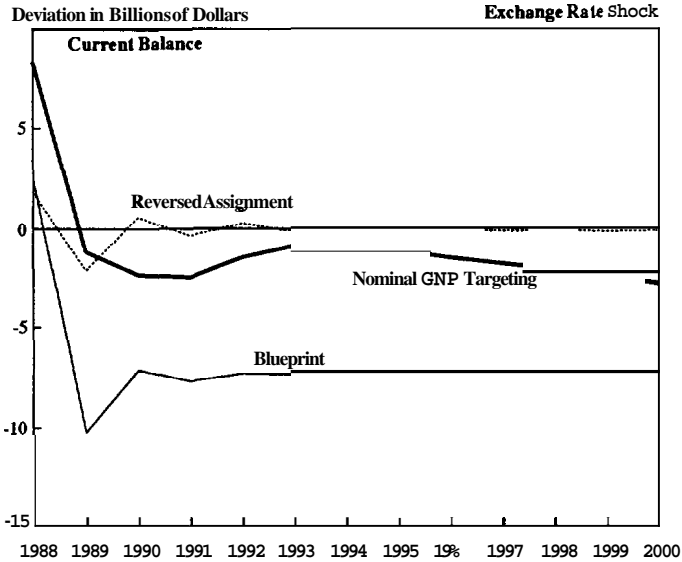
**Chart 3 (continued)**  
**Responses of U.S. Variables to Temporary Foreign Shocks**  
 (each equal to 1% of GNP in 1988)



### Chart 3 (continued)

## Responses of U.S. Variables to Temporary Foreign Shocks

(each equal to 1% of GNP in 1988)



term. However, the resulting higher interest rates crowd out to some extent domestic investment, and lead to lower aggregate supply. Moreover, higher interest rates cause a deterioration of the U.S. net investment income balance (given its position as a net debtor), and the current account remains in persistent deficit after the first year. The other rules allow more stimulus to output in the short run as a result of improved competitiveness, **but only** a moderate amount of increased inflation. Unless exchange rate stability has other advantages not captured in the simulations, the superiority of the blueprint rule is not clear-cut.

The second external shock is (a negative) one to U.S. exports (a 5 percent decline in manufactured export volumes). It has as its principal initial effect, a deterioration of the U.S. current account balance, as well as a fall in U.S. GNP. The reversed assignment rule attacks these symptoms directly, by tightening fiscal policy and easing monetary policy, at least initially—with conflicting influences on output and prices. Nominal GNP targeting also leads to an easing of monetary policy, while the blueprint tightens monetary policy to resist the depreciation of the dollar (it also eases fiscal policy). Which of these different policy mixes is the most appropriate one? The answer is that it depends on whether the shock is temporary or permanent, or more generally, on its persistence. If there is a permanent decline in the demand for U.S. goods, then in equilibrium a real dollar depreciation is appropriate; if temporary, then some smoothing may be desirable. The export shock reported in Chart 3 is temporary, but exhibits considerable persistence. How much of its effect should be resisted depends on a judgment about the costs of various variables being away from long-run equilibrium.

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