The Policy Consequences of Interdependence

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Economic policy-making is in the midst of a revolution. This revolution is not the product of new philosophies of government or a changed political environment. Rather, the policy-making revolution is the inevitable response to the increasingly interdependent world in which all individuals and countries coexist. To understand the revolution in policy and to interpret the likely direction of future economic policies, a keen understanding of how economies are linked is essential.

The intellectual framework underpinning the monetary approach to international adjustment provides a set of valuable insights into both the capabilities and the limits of macroeconomic policy in an interdependent world. This approach is also the product of a revolution in academic thinking, because it redresses two flaws in more traditional macroeconomic thinking. First, international economics in the 1950s and 1960s focused heavily on trade flows as the primary linkage among nations. Capital flows were often omitted from the analysis or assumed to be a passive function of trade. In the monetary approach, capital flows take their proper place alongside trade flows as key economic links among countries. Second, traditional domestic economic approaches, both monetarist and Keynesian, consistently ignored or greatly underestimated the importance of international linkages. Closed-economy models were often used to support policy decisions which were applied in a distinctly open-economy world with extremely different results than predicted. Again, because the monetary approach to international adjustment takes well-integrated world goods markets and capital markets as basic assumptions, the policy implications are much more robust in today's interdependent world.
In this chapter, three policy issues will be highlighted for the purposes of understanding the capabilities and limits of economic policy in an interdependent world. The policy issues discussed are: (1) the appropriate goal of monetary policy, (2) the importance of long-run policy credibility, and (3) the appropriate world monetary system, that is, the fixed versus floating exchange rate debate.

MONETARY POLICY IN AN INTERDEPENDING WORLD

The primary policy lesson from the monetary approach to international adjustment is that there is no such thing as purely domestic monetary policy. Whether monetary policy is implemented by a central bank buying or selling securities in the domestic market or by buying or selling currencies in the foreign exchange markets, the net result is a monetary policy that simultaneously affects domestic and international markets. This point is made explicitly in the monetary approach by its focus on the asset side of a central bank’s balance sheet, rather than the liability side.

Most domestic, closed-economy models consider the supply of money as a function of the monetary base and some multiplier representing the leverage in the banking system. This is essentially a liability-side approach since the monetary base is defined as currency and deposits held by banks with the central bank (that is, central bank liabilities). The monetary approach accepts this view, but carries the analysis much further. Assets equal liabilities: any change on the liability side of a central bank’s balance sheet must have been accomplished by changes in central bank assets. By dividing the assets into two broad categories—international reserves and domestic assets—and explicitly considering the mechanism by which liabilities are changed, the monetary approach can address a number of issues not covered by traditional approaches.

Foreign Exchange Intervention

For example, can foreign exchange intervention by central banks affect the course of exchange rates? This is a classic issue where closed-economy models either cannot answer the question or answer it incorrectly.

Foreign exchange intervention involves the purchase or sale by a central bank of its own currency for a foreign currency. In the typical case, a country with a depreciating currency will intervene as a buyer of its own currency and a seller of foreign currency. The initial effect on the central
bank's balance sheet is a reduction in international reserves (asset side) and a reduction in the monetary base (liability side). If the intervention story ended here, there would be an effect on several variables. The decrease in the monetary base could be characterized as a tightening of monetary policy, resulting in a stronger currency.

Usually the story continues, however, with the central bank entering the domestic market to offset the reduction in the monetary base. That is, the central bank sterilizes the foreign exchange intervention's effects on the monetary base by buying domestic assets. Now, the liability side of the balance sheet, on net, is unchanged. On the asset side, the central bank holds fewer international reserves and more domestic assets and the same quantity of total assets. The monetary approach concludes that with total assets and total liabilities unchanged, monetary policy must be unchanged, with no effect on exchange rates.

Had the central bank not sterilized the foreign exchange intervention, then both the exchange rate and domestic monetary policy would have been different. Here, the monetary approach is explicit. Foreign exchange intervention is a tool of domestic monetary policy because it affects the monetary base—unless it is sterilized. The causality runs from the monetary base simultaneously to domestic credit markets and the exchange rate. Anything that changes the monetary base will affect both domestic credit markets and the exchange rate. Sterilized intervention, because it involves no change in the monetary base, does not change prices in either domestic credit markets or foreign exchange markets.

Interest Rate Targeting

Another way of illustrating the inextricable link between monetary policy and exchange rate policy is through the effects of a typical open market operation; in this example the monetary base is contracted through central bank sales of domestic assets. This usually is viewed purely as a domestic policy initiative. There are effects, however, simultaneously in the foreign exchange markets. A smaller monetary base implies less inflation in the future and a stronger (or less weak) exchange rate immediately (other factors held constant).

Now, suppose a central bank chooses to target interest rates rather than the monetary base. Events in other countries, then, can have a powerful impact on the exchange rate. If one central bank were to induce a rise in interest rates by a large amount, then other central banks would be forced to make a choice. They must either watch their currencies depreciate (constant interest rates) or tighten their monetary policies to stabilize the exchange rate. For the most part, when the U.S. Federal
Reserve tightened on several occasions during 1980-82, the rest of the world revealed a preference for a relatively easier monetary policy and accepted the potential consequences of a depreciating exchange rate. More important, central banks around the world could not insulate themselves from the U.S. policy shift. Either their economies felt the U.S. policy through the exchange rate or the domestic interest or some combination of the two, but economies around the world had to deal with the U.S. policy shift.

The United States is just as subject to changes in policies in the rest of the world. In the 1976-79 period, the inflation path of the U.S. economy was exacerbated by foreign policy moves geared toward lower inflation. The exchange rate dramatically reflected the policy differences and significantly reinforced the inflationary pattern in the United States. Most traditional, closed-economy models of the United States failed miserably to forecast the high inflation or the weak dollar period, then failed again by overestimating inflation during the strong dollar period of 1980-84.

The monetary approach to international adjustments does not treat an economy differently because of its size or relative percentage of imports to gross national product. As long as world markets are competitive, the United States cannot be treated as a closed-economy island. This realization is the essence of the revolution that is occurring in economic policy-making in the United States. Yes, Virginia, there is a foreign sector and understanding it is absolutely critical to (domestic) policy-making.

POLICY CREDIBILITY AND CURRENCY SUBSTITUTION

The importance of the long-run credibility of economic policy does not surface in most traditional economic models. With the burgeoning literature on rational expectations, however, more attention has been focused on separating permanent policy shifts, which can have profound effects, from temporary ones, which have a muted effect. Still the issue in exchange rate analysis was not accentuated until the basic monetary approach was extended by addressing the issue raised by the substitutability of world monies—currency substitution. This is a portfolio approach to exchange rates and introduces concepts of risk and risk-related behavior into exchange rate determination. The importance of this issue in an interdependent world cannot be emphasized enough.

To understand currency substitution one must think like an international portfolio manager or like a child playing marbles. For example, in your pocket are red and blue marbles and each work equally well for playing various games because the rules do not distinguish between the two
colors. You are indifferent to the mix of red versus blue marbles in your pocket, because nothing is at stake in the choice. This represents the fixed exchange world of the 1950s and 1960s. The U.S. dollar was the standard, and an accumulation of dollars (red marbles) was not looked upon as affecting one’s wealth position. But in the 1970s the rules changed. Exchange rates were no longer fixed. Red marbles and blue marbles were no longer equals; some games require one color, others the other. In short, the ability to compete now depended upon the mix of marbles or currencies that you were holding. There were real risks and real wealth effects emanating from one’s choice of currencies (or marbles). The assessment of these risks could affect one’s currency choice and, as a result, affected the exchange rate between two currencies.

In the United States, each Federal Reserve branch bank can issue currency with its own seal. As long as these currencies trade one for one, U.S. citizens are indifferent (if not ignorant) of the mix between St. Louis Federal Reserve dollars and New York Federal Reserve dollars. If ever the possibility of the exchange rate changing occurred, however, indifference (and ignorance) about currency mix would disappear quickly. In this first case, knowledge of exchange rates yields no return—or ignorance has no cost. In the second case, the cost of ignorance and the return to knowledge is very high.

Currency substitution introduces the concept of portfolio risk into exchange rate determination. The ultimate risk involved is the future purchasing power of each currency. As a result, the risk assessment focuses on the long-run commitment each country has to stable prices. Changes in this commitment to stable prices can result in large and swift reallocations of assets within portfolios or in large and swift changes in interest rates and exchange rates.

The transitions of the United States from world economic leader (1950s and 1960s), to a fallen star (1970s), and back to world economic leader status (1980s) illustrates the importance of the currency substitution concept in understanding the role of policy credibility in exchange rate determination. As the commitment of U.S. policy toward price stability eroded in the late 1960s, the first effect was the breakdown of the fixed exchange rate system. Fixed exchange rate systems enforce currency substitutability from the supply side, by central banks’ commitment to buy (destroy) and sell (create) their own currency in accordance with a given exchange rate. With the guarantee of supply-side substitutability removed, portfolios had to be readjusted to compensate for the new risks of the floating rate regime. Demand-side substitutability became a critical ingredient of exchange rate determination; risk now mattered.

Demand-side substitutability represents the willingness of those holding (or potentially holding) multicurrency portfolios to adopt a stable
mix of currencies. This is where policy credibility plays the key role. One cannot profitably (given the risks) adopt a stable currency mix if policies around the world shift in unpredictable ways. As a country’s policies, particularly toward inflation, become less predictable, there is an increased risk that the expected inflation path will not be achieved. Risk and return go hand in hand, and as a result, the markets extract a premium for bearing the increased risk. Effectively, this means that portfolios must be reallocated away from the now riskier currency, the costs of ignorance or indifference have risen.

In the 1970s, the United States’ commitment toward stable prices and predictable policies eroded in fits and starts. But with each episode of policy uncertainty, the share of dollars in world portfolios had to be adjusted—downwards—to reflect the greater risks and the decreasing expected usefulness of the U.S. dollar. Without considerations of currency substitutability, most, if not all, economic models of exchange rate determination grossly underestimate the potential for exchange rate shifts when long-run policy credibility is at stake. This was certainly the case in the 1970s as the dollar declined throughout the decade.

The 1980s taught the same lesson in reverse. With the combination of a Federal Reserve committed to low inflation and a president committed to economic incentives, the United States began to reassess world economic leadership. As the commitment to low inflation became more clear, long-run policy credibility was slowly restored. The dollar responded by defying the predictions of traditional models. With the relative usefulness of the dollar enhanced by the reduced risks associated with the United States’ newfound commitment to low inflation, world portfolios were adjusted—with the dollar’s share rising. This meant that basic price, trade, and interest rate models failed to capture a fundamental portfolio realignment, based upon a reassessment of currency risks which was predicated upon a considerably more credible (read predictable with respect to inflation) long-run U.S. monetary policy.

Another example is the Mexican devaluations of 1991 and 1982. These two cases produced strikingly different results, primarily because of differences in policy credibility which were magnified by currency substitution. The 1976 devaluation came after several years of inflationary policies, and the devaluation was virtually inevitable and widely predicted. But the devaluation came against a backdrop of two decades of peso stability as measured against the U.S. dollar. This legacy of policy credibility was not easily erased, and when the peso was finally allowed to float, it roughly redressed the cumulative inflation differential with the United States of the prior 10 years by depreciating from pesos $12.5 pesos to $20-22 range. The absence of appreciable overshooting can b
explained by the perception that the new president would restore policy
credibility. He appeared to be doing so in 1977 and early 1978.

When this perception proved incorrect in the early 1980s the stage was
set for another devaluation to redress the inflation differential with the
United States. In 1982, however, the peso devaluation was marked by
chaotic conditions and a peso dramatically weaker, by a factor of two or
more, than inflation differentials suggested. Why? By 1982 policy
credibility had eroded and what was left of the peso’s demand-side
substitutability with the U.S. dollar was obliterated by capital controls and
finally the peso-ization of dollar bank accounts in Mexico. The move from
fixed exchange rates and perfect supply-side currency substitutability to a
floating (read sinking) peso and quite limited demand-side substitutability
was associated with a massive realignment of portfolios away from pesos
wherever possible. Capital controls, government edicts, and bureaucratic
“witch hunts” only made diversification more difficult through quantity
changes in stocks of dollar assets. Thus, markets adjusted through massive
price changes.

The lessons from the U.S. and Mexican illustrations are obvious:
policy credibility is absolutely essential for exchange rate stability. Further-
more, policy shifts that either increase or decrease long-run credibility
change the risks associated with holding a given currency. This sets in
motion portfolio adjustments above and beyond those captured in
traditional models. Or from a policy perspective, the lesson is that there is
no such thing as policy independence, even under floating exchange rates.

FIXED VERSUS FLOATING EXCHANGE RATES

The contribution of the monetary approach to international adjustment
and its most important extension, currency substitution, to the fixed versus
floating exchange rate debate has been dramatic, yet inconclusive. That is
to say, the monetary approach does not lend itself to a conclusion that
either fixed or flexible exchange rates are preferable. Rather, the concepts
embodied in the monetary approach have altered the terms of the debate
and focus attention more directly on key judgmental issues. Should
monetary authorities have discretion in the conduct of policy? How should
policies around the word be coordinated, if at all?

These are old questions. To understand how the evolution of the
monetary approach has affected these debates, one needs to take a broad
view of the fixed versus floating exchange rate controversy. Two
perspectives are important—the closed economy view (the United States) and the open economy view (Europe) of much of the rest of the world.

The Debate in the United States and Europe

In the United States, the fixed versus flexible exchange rate debate has been conducted within the context of one very key and generally accepted assumption: the independence assumption. Monetarists (of the traditional domestic variety) have argued that flexible exchange rates allow each country to adopt its own monetary policy, independent of its trading partner’s policies, thereby setting the context for the debate. And, Keynesian economists have generally accepted this concept.

With independence of policy assumed, the debate then focuses on the most appropriate monetary policy for the United States. Broadly speaking, there are three choices:

1. **Discretionary Policy.** Monetary authorities focus their attention on changes in interest rates based on changing economic conditions. Real economic growth is the primary goal.

2. **A Money Stock Growth Rule.** Set into law, and rigidly enforced, monetary authorities focus only on achieving a stable and slow growth in one precisely defined monetary aggregate. Price stability is the key goal.

3. **A Gold Standard.** The monetary authorities enforce a fixed and never-changing price of gold. Again, price stability is the key goal.

As can be seen, this is not a debate about the international monetary system, but a debate about the conduct of U.S. monetary policy, independent of choices made by other countries. Even the third option, the gold standard, would not require other countries to link their currencies to gold. That would be their choice. In short, in the United States the exchange rate debate starts with the question of how monetary policy should be conducted domestically. And as an addendum, the debate allows other countries to choose whether they want the same policy (fixed exchange rates) or a different policy (floating rates).

Among Europeans the assumption of absolute policy independence is never made, for European countries are quite obviously much more dependent on the actions of their neighbors. Still, there are concerns about the degree of policy independence that is possible and desirable. The debate is couched in terms of the trade-offs: scope for independent action...
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The Challenge of Interdependence

The monetary approach, and particularly its currency substitution extension, directly challenges the foundation of the debate. By arguing: (1) that there is no such thing as purely domestic monetary policy, (2) that national money stock changes cannot be analyzed in isolation from world economic conditions, and (3) that flexible exchange rates do not yield policy independence, the debate must be reexamined in both the United States and in Europe.

First, the debate cannot assume that the results in terms of economic growth or inflation for a given monetary policy are independent of policies around the world. The "rule" versus "discretion" argument must be recast. Now, the debate is one of international coordination versus the costs of exchange market volatility. And in Europe, the conclusion is similar. Interdependence, within Europe and with the United States, has increasingly focused the debate in terms of the costs of exchange rate volatility risk associated with uncoordinated policies. This is, of course, the essence of interdependence.

Expectational theories argue that nominal variables adjust to keep real variables more stable. That is, currencies are numeraries and exchange rates are the ratios of these nominal values. With efficient markets and rational expectations, these nominal variables can adjust to policy shifts, leaving real factors relatively unaffected. The key here is that the policy shifts must be anticipated. If market efficiency and rational expectations render policy shifts impotent. If policy shifts are not anticipated, however, there can be real effects as well as nominal ones. This conclusion focuses the exchange rate debate on the question of whether a fixed or a flexible exchange rate system makes policies more or less predictable.

The contribution of the currency substitution literature is to argue that if policies are not credible or predictable, the risks of policy change will have a large cost. Indeed, one always pays a premium for risk. In this context, the monetary approach to international adjustment and the currency substitution approach do not provide any simple answer. They do, however, force the debaters to answer an important question: which
exchange rate regime reduces the risk of unanticipated, destabilizing, and costly policy shifts?

Second, the rules versus discretion debate concerning the conduct of monetary policy is given new importance by the currency substitution arguments. By emphasizing long-run policy credibility, the issue can be seen in terms of contracts. Under a fixed exchange rate system or an international gold standard system, the monetary authorities make a contract to fix the price of their currency to the standard. This contract can increase policy credibility if market participants believe it will be honored for long periods of time. Discretionary systems do not involve such contracts, and almost by definition, policy becomes more volatile. The increase in volatility associated with discretionary policies would be preferable if and only if the monetary authorities correctly anticipated disruptive economic events and moved to minimize them. Traditional monetarists and gold standard advocates have argued that the authorities' ability to do this is lacking and that there will be costly policy mistakes. It is better to stick to a rule. But, what rule is best? Here, the monetary approach challenges traditional monetarist thinking.

Third, domestically based monetary rules may have unanticipated results due to the important failure of traditional monetarist theories to consider international policy interdependence and multicurrency portfolio behavior. If the monetarist assumption of independence under a floating exchange rate is rejected, domestic monetarists lose a leg in their case for a money stock rule. Monetarist concerns about rules versus discretion remain valid, but the appropriate rule is questioned.

In sum, the monetarist approach to international adjustment has recast the fixed versus floating rate debate in terms of policy credibility, the need for policy harmony internationally, and the costs of volatility. Traditional monetarists have been challenged by the rejection of the independence assumption, but the rules versus discretion debate continues.

The Exchange Rate Regime Does Not Matter

As a final consideration, once one accepts the full implications of policy interdependence, then even the relevance of the fixed versus floating exchange rate debate can be questioned. The choice of fixed versus floating exchange rates may no longer matter for the achievement of longer-term economic goals such as price stability or economic growth, unless other assumptions are made about policy choices.

Fixed exchange rates merely enforce policy harmony, but the outcome for prices and growth depend on the coordinated policies which are chosen. Flexible exchange rates allow for different policies, but major
policy divergences set in motion extremely powerful exchange rate changes. These exchange rate changes tend to discipline the offending country—that is, the country that is out of step in terms of policy choice. Relatively expansionary policies lead to dramatic currency depreciation and inflation, while relatively restrictive policies lead to currency appreciation and potential deflation. As an empirical matter, severe, unanticipated inflation, disinflation, or deflation all appear to have negative correlations with real economic growth.

In sum, either the system provides a set of rules or the market provides penalties. In both cases, fixed or floating, however, the price and income results depend upon the fundamental policies, not upon the exchange rate regime. Hence, the choice of the exchange rate regime does not matter, independent of the set of contracts enforcing policy behavior.